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REGIONAL DEVELOPMENT

State Orders Cause Concern in Estonian Enterprises

18200163a Tallinn SOVETSKAYA ESTONIYA in Russian 20 Apr 88 p 2

[Article by V. Pyankova, SOVETSKAYA ESTONIYA special correspondent, under rubric "Khozraschet Dictates": "In the Grip of the State Order"]

[Text] By statements made by P. Maran, ESSR deputy minister of the timber, woodpulp-and-paper, and wood-processing industry; M. Markovich, general director of the Tallinskiy Fanerno-mebelnyy Kombinat Association; V. Kanisev, brigade leader at that association (SOVETSKAYA ESTONIYA, 10 September 1987); and G. Shurupova, deputy general director at economics at the same enterprise (27 December 1987), our newspaper began a discussion about how the fate of our republic's furniture branch is developing as a result of the changeover of the enterprises in the ministry to complete cost accounting as of the beginning of the current year. These statements indicate that the initial optimism has been gradually replaced by concern, the reason for which has been the exaggerated figures for state production orders that were received by the plywood-furniture combine from the ministry. The editorial office has deemed it necessary to continue the discussion about the state of affairs in the branch after the changeover to the new management methods, referring to the practice of the first months of operation according to the new method at the Narva Furniture Combine.

Tallinn—Narva—Moscow—Tallinn. Although the people in Narva received a state production order equal to an annual plan that was prepared for the five-year plan with a numerical breakdown by years, there is no conviction here that it was justified to exert this kind of administrative pressure upon the enterprise. That conviction is lacking among the workers, who are concerned by the increase in the intensity of their labor and by the jerkiness of the shipments, as a result of which, at the present time, the fulfillment of the plan requires them to work even on their days off (read about this the statement made by brigade leader S. Kholostykh in SOVETSKAYA ESTONIYA, 18 March 1988). It is also lacking among the managers, who know too well the real capabilities of their production, and therefore feel that the state order cannot be fulfilled by increasing the amount of output produced.

Why, then, I ask, have you accepted a state production order which, in your opinion, is so beyond your capabilities? And I hear from V. Myachin, the combine director, that the method employed from the top was the old and primitive one of "arm-twisting" — S. Sinani, the minister of the republic branch himself, had come to Narva to force the people there to agree to accept it.

And the fact of the matter is that, during the establishment of the five-year plan with the numerical breakdown by years, that is, at the very beginning of the five-year plan, it was proposed that, by 1988, a shop would be built at the Narva Furniture Combine and would begin operating — that shop would produce tennis racquets and have an annual volume of production with a value of more than 2 million rubles. As of today, the shop has not been built, there are no racquets or even any mention of them, but the millions of rubles invested in them have very quietly migrated both into the present plan and into the state production order.

Are we really to believe that this is not an absurd situation? Isn't it really, fundamentally, the same picture that we observe at the Tallinn Plywood-Furniture Combine, where the state production order for consumer goods proved to be 3 million rubles more than was stipulated by the plan for that year that had been established at the beginning of the five-year plan? The only difference is that the people in Tallinn acted in a way that was unexpected for the ministry — there the labor collective refused the state production order with the obviously exaggerated figures.

At the republic ministry this fact causes only irritation. Minister S. Sinani, for example, commented upon it by the simple phrase, "They can moan all they want, but the republic this year will be short of consumer goods, so that it is not precluded that the figures for the furniture makers might be raised even more." P. Maran, the first deputy minister, asserts in what is probably a serious tone that the managers of those "striker collectives" have only one way out — they must give their job to someone else if they can't "cut the mustard" with the state production order that absolutely must be fulfilled. He points to lines in the Law Governing the State Enterprise: "State production orders are issued to the enterprise by a superior agency..., they are mandatory for implementation." Then, farther on, I read: "When state production orders are being issued, provision must be made for the reciprocal responsibility borne by the two contracting parties — the party executing the order and the party issuing the order." I might explain that the party executing the order is the enterprise or association. The party issuing the order, in our instance, is the ministry, that is, the superior agency that issues the state production order.

But it is this principle stated in the Law that serves as the basis for the protest by the collective at TFMK [Tallinn Plywood-Furniture Combine] and that causes the discontent on the part of the Narva furniture makers: they are obliged to fulfill a difficult, extremely strenuous state production order, but the republic ministry has proven to be incapable of fulfilling its obligations to the collectives — it has been unable to provide them with the necessary labor and material resources or to achieve steady shipments even among the enterprises in its own branch.

The people in Narva, for example, do not have good fabrics or Porolon [synthetic foam material] for producing upholstered furniture, although they produce 80 percent of this kind of furniture in the republic, and they have been experiencing interruptions in the deliveries, for example, of spring assemblies from Tarmel and of other materials from enterprises in their very own ministry. As a result, literally until the end of each month the collective does not have any conviction that the plan will be fulfilled. Whereas previously the people at the combine worked overtime, at the present time — in January, February, and March — in order to fulfill the plan they have also begun to work on their days off, which is something that never used to be allowed. But they have no recourse — disruption of the state production order, under conditions of cost accountability, is fraught with losses of the profit that is necessary for normal economic activity and for the development of the social sphere.

"As the enterprise manager, I have no assurance that the ministry worries about us or defends our interests," V. Myachin admitted.

P. Maran, in response to that reproach, began giving figures. Initially, as far back as August 1987, he states, the ministry received from the union-level headquarters of the branch a state production order for consumer goods that exceeded by 29 million rubles the approved figures for the five-year plan for that kind of output; however, after all was said and done, it proved to be possible to reduce that total to 17 million rubles. Nevertheless, he agrees, the state production order continues to be very rigid, and he promises that the enterprises will receive everything they need to fulfill those assignments.

"Forced to accept..." That was the main idea in the statements made by the director of the Narva Furniture Combine and the first deputy minister. But who forced all of them, and why? I make a telephone call to Moscow, and then I go there.

V. Gorshkov, one of the deputy chiefs of the Economic-Planning Administration of USSR Ministry of the Timber, Woodpulp-and-Paper, and Wood-Processing Industry, a person who is directly linked with the establishment of state production orders, attempted to substantiate the crudely administrative and coercive methods that continue to be employed in managing the branch. He gave the following reason: it is necessary to take into consideration the complexities of the present period and the unsatisfied demand for many commodities, including furniture. Therefore USSR Gosplan added onto the ministry's annual plan that had been stipulated at the beginning of the five-year plan an additional billion rubles for that group of commodities. That billion had been divided among the republic ministries, and they had received additional millions on a state production order. The measure, Vladimir Borisovich said, was a forced one, and the people at the enterprises must understand correctly both the difficulties that are being experienced today, and the tasks. The

ministry itself does not have the right to refuse a state production order that is so strenuous — the principles stated in the Law Governing the State Enterprise do not extend to departments. It is to the low-level collectives that the Law gives the right to defend their interests. But at the present time that right has proven to be, as it were, nonexistent, since the independence has been paralyzed by pressure from above: pressure on the enterprises from the ministries, and on the ministries from Gosplan.

I. V. Gorshkov and Ye. Romanenko, another deputy chief of the Economic-Planning Administration of USSR Minlesdrevbumprom [Ministry of the Timber, Woodpulp-and-Paper, and Wood-Processing Industry], attempted to explain the principles that guide Gosplan. The phraseology, true, turned out to be rather heavy, but it is literally as follows: "The state production order was established with a consideration of social needs and the tasks of achieving a balanced situation with regard to the public's monetary resources." Deciphering what that means, people have money, but the state budget has been receiving less of it, despite the measures to combat drunkenness and alcoholism, and therefore it is necessary to get that money by increasing the sale, and obviously the production, of other consumer goods.

But, one might ask, what do the labor collectives have to do with the distortions in planning "at the top"? And what do you and I, the consumers, have to do with them? Why it is necessary now at enterprises to pull our belts in tighter, as though we are lifting a record-breaking weight, and to open our shopping bags a little bit wider at the stores?

Practical life shows us that an increase in the figures in the state production order, unfortunately, does not completely mean that there will actually be more commodities. Both the plan and the state production order "descend" to the enterprises not in a specific quantity of items, but also in those same rubles: they will produce output valued at so many million rubles. And if they had to produce it under any conditions, then what has turned out to be the situation as of today is that it was produced at any cost. At the specifically increased price of the articles, by using, in the manufacture of the commodity, materials and fittings that were more expensive than those used previously.

Unfortunately, these theoretical computations by the end of the first quarter at the Narva Furniture Combine were confirmed by practice. The state production order was fulfilled, but not by means of a considerable increase in the number of items produced. Rather, it was as a result of an increase in the price of the furniture sets being produced here. The new Dora wall unit, for example, is 200 rubles more expensive than the previous Norda, although, in outward appearance, there is little difference between them, except that the Dora does not look as nice. As for quality, they are completely identical,

except that the lacquer and trimmings have become more expensive. Combine director V. Myachin told me about this "testily" and desparately.

This is how all of us are affected by the increased state production order for the furniture branch. Involuntarily one wants to shake the hand of the people who are so censured at the ministries — the Tallinn furniture makers who became aware of the real situation from the very beginning and who have continued to refuse the proposed state production order even under fierce administrative pressure.

In a word, there are fears that the factors mentioned by the managers of the republic-level and union-level ministries — "the complexities of the present period and the tasks of achieving a balanced situation with regard to the public's monetary resources" — might prove tomorrow to be new complexities and tasks linked with a large increase in the prices of items produced by enterprises in the branch.

At USSR Minlesdrevbumprom, attempts were made to assuage me: work is currently under way to prepare the state production orders for next year, and tentatively they will not exceed 81 percent of the plan. But this did not assuage me very much. First, it is not yet known what Gosplan will do with the proposed figures, since Gosplan is defending the interests, it would seem to me, not of the population — that is, the state — but its own department. Secondly, if today even the state production order is supported incompletely with material resources, then won't the "air" in the plan worsen the situation? Tue, the managers of the Narva Furniture Combine have a very high opinion about the organizing by ESSR Gossnab of wholesale trade, and they hope that, with the freedom of maneuvering, they will be able to get everything they need, including things obtained on the basis of direct contracts with other enterprises. But — and this is the most important thing — we are all perfectly aware that prices of consumer commodities that are once increased for whatever temporary reasons have the tendency not to lower their level. Thus, the quantity of commodities as a result of the state production order issued by USSR Gosplan will increase minimally, but the prices will rise tangibly. And the ones who lose will continue to be the public.

It seems to me that all of us — both the enterprises and the customers — have found ourselves in the grip of the state purchase order. Does that mean, then, that we should sit around without fighting? Should we stand at attention when we receive an official's instruction from above, which, when all is said and done, is what the branch ministries did, thus putting under threat the labor collectives of their enterprises, and also you and me? Which do we prefer — punishing the "obstinate ones," or getting in the same rank with them? I think that the choice of the position that one takes is firmly based on principle.

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Tallinn Open Meeting Discusses Republic Khozraschet

18200163b Tallinn SOVETSKAYA ESTONIYA in Russian 21 Apr 88 p 1

[Article by A. Favorskaya: "Republic Khozraschet and Us"]

[Text] For two days the hall of the Institute for Refresher Training for Managerial Specialists of the ESSR National Economy, in Tallinn, was absolutely crammed. The large number of people had been gathered by the open discussion of the topic "Regional Khozraschet in Estonian SSR," to which the Forum Section of the ESSR Union of Journalists had invited anyone so wishing to attend.

If the avid interest in the problem (the discussion in Russian also took place with the participation of hundreds of people) might seem to some to be unexpected, it apparently did not seem so to the participants themselves. Those who come to this hall — engineers, economists, designers, sociologists, journalists, enterprise workers, and workers from various spheres and departments (and, we might note, they were not only from Tallinn) — did not simply listen to the very interesting statements made by the specialists whose names were announced in the program, but also asked to be able to speak from the rostrum themselves — to express their own opinion, to state an objection, a recommendation "with regard to" or "in connection with," which was expressed on the spot, evoking the most lively reaction from the audience. The ideas that were shared with the audience at the beginning of the meeting by ESSR Academy of Sciences Academician M. Bronshteyn, candidates of philosophical sciences Ye. Golikov and E. Savisaar, and sociology scientist M. Lauristin could not fail to touch upon everyone.

The idea being reported was one that has matured in the republic — the idea of regional cost accountability as the harmonious, integrated development of the territory — and it was reported in an interesting manner, but how does it pertain to the task of the socioeconomic development of the entire country? Won't the republic's cost accountability lead to the republic's own economic exclusivity? How will it influence the level of our life, the ecological situation, the relations among nationalities? What links during the restructuring that has begun are the most important ones and what is needed to assure that that restructuring will be completely implemented?

Do many of us have ready answers to these questions? Yet, as Academician M. Bronshteyn said, life itself is leading us today to the concept of territorial cost-accountability systems. Without the balanced development of the territory, there can be no balanced development of the country, a balanced development in which we are identically self-interested. And it is only with this kind of organization of the job at hand that there will be no

"plundering" of the departments which have ceased guaranteeing scientific-technical progress and expressing the interests of the Union as a whole. The success of our economy can result only from the changeover from the administrative system of management (in which the branch approach dominates) to an economic system that is based on the principle of cost accountability — and all of this, incidentally, has been formulated in the party documents. The administrative mechanism must be destroyed.

All right, then, is it republic cost accountability?

But what is its conceptualization, if one speaks in specific terms? Where does it lie? Wherein is our place in the overall system? Where is, so to speak, our "ecological niche"? With what does the republic intend to go out onto the domestic and international market? How does one encourage the rapid introduction of scientific-technical achievements, how does one activate the republic's intellectual potential more completely?

Questions, questions... The concept of republic cost accountability, it turns out, is not yet completely worked out. "Working models" have shown how many difficulties will have to be overcome in this matter. It will be necessary, for example, to resolve the problem of the republic's sovereignty with respect to natural resources; to guarantee a truly equivalent exchange of commodities with other regions, because, in the opinion of economic scientists, that exchange currently is by no means equivalent, but, rather, is... exploitation. And, also, our agencies of administration, in defending the just interests of the republic, must display persistence.

Questions of self-interest. Simultaneous laughter. Sharp, provocative, at times even irate statements from members of the audience. This is natural, because people are thinking and arguing. They are arguing and even applauding: some are applauding one speaker, and others are applauding another. They want to know more than they have known and heard up to now. Newspaper articles and television broadcasts are all right, but thinking this way, talking together, weighing opinions "face to face" with the people originating them, is something completely different. It gives rise to boldness in defending one's principles, in opposing pressure, and in having one's own position. These "meetings for everyone" to discuss a vitally important matter are, in my opinion, a

very good idea. Thank you, Forum! Especially since it seems as though people are beginning now to get a better understanding of us people who gathered there.

It was expected, and people, for example, said from the rostrum, that the meeting in Russian would probably attract no more than 10 or 20 people. And then, suddenly, there was this obviously mass interest!

And what is surprising about that? Are we really to believe that we do not live in a single republic, in this "small pot" at the junction point of information streams where, as Maryu Lauristin said, the awareness of the ties between phenomena, and of their causes and consequences, occurs more rapidly than on other, even larger, territories. In a few places, people continue to put their trust in the rigidity of laws, upon increasing the "sense of responsibility," and have not yet got rid of stereotypical fears. But here people have supported for a long period of time the radical path of restructuring that was proposed by M. S. Gorbachev, and they are aware of the irreversibility of those changes. Thus the "additional educating" of certain people and the "additional reforming" of certain things is not the right path. Restructuring for the republic is primarily the fight against bureaucracy. Including the bureaucracy in the sociopolitical sphere. Incidentally, the popular front, the idea of which was expressed almost simultaneously in Moscow and Tallinn (and which also was heard at the meeting), must be understood as a **mechanism of participation in cost accountability by all residents** on the basis of a single attribute: the promotion of radical restructuring!

It is possible to resolve something successfully only by making overall decisions. It is possible to learn how to act jointly and how to develop democratic forms only by resolving overall economic and political tasks, M. Lauristin said. We might add: we do have overall ones, and in our opinion there is no need to prove this. And the "time lag" in the response shown by the Estonian and Russian-language press to certain problems that have been disturbing the republic (and this too was mentioned at the meeting) must be perceived without any prejudices, remembering, in particular, such an inevitable natural factor as the linguistic barrier. The barrier must be removed by common efforts.

And we have just one path. In general, people have begun living in a more interesting way!

AGRO-ECONOMICS, POLICY, ORGANIZATION

Further Development of Garden, Orchard Production

Value of Garden Plots Emphasized

18240068a *PRAVDA* in Russian 11 Feb 88 p 3

[Article by B. Aleksandrov: "Around the Orchards and Gardens"]

[Text] Many of us have orchard tracts. As is known, they require a great amount of concern and yet the advantages to be realized from them are obvious. This includes healthy recreation and the possibility of obtaining a strong increase in the family budget in the form of vegetables, fruit and berries. And what does our budget include specifically and what difficulties are being experienced by the owners of orchards and gardens? We have interesting data at our disposal regarding this subject, data which was obtained by USSR Goskomstat [State Committee for Statistics] as a result of a one-time sampling study of 5,000 families of manual and office workers. These families all resided in municipal areas and participated in orchard and gardening work.

It turned out that of the number of families interrogated 55 percent have orchard tracts, 31 percent — garden tracts, 1 percent — summer plots and 13 percent — other types of tracts (this includes tracts co-located with their homes, tracts purchased in rural areas and also tracts which were inherited). The average size of an orchard tract is 0.05 hectares. Thirty nine percent are occupied by fruit and berry plantings and vineyards, 41 percent — potatoes, 17 percent — vegetables and melons and 3 percent — by flowers and other crops. On the other hand, almost all of the land assigned for garden tracts (95 percent) is used for the "secondary grain" — potatoes.

A chief concern if you please is the yields and the use being made of the "tops" and "bottoms." For some crops, the picture for all types of land tracts is as follows. The average fruit and berry yield per family is 62 kilograms and of this amount 82.1 percent is used by the family or held in reserve, 9.7 percent is turned over to relatives or friends and 6.9 percent is sold. The average potato yield per family is 299 kilograms. The largest portion of this amount is consumed by the family or held in storage, 1.9 percent is turned over to relatives and 1.3 percent sold at the market. The average yield for vegetables and melon products is 77 kilograms and their distribution is roughly the same as that for potatoes.

The results of the study reveal that it makes good sense to carry out gardening or orchard work. Indeed, statistics reveal that the operators of these tracts are able to satisfy one half of their fruit and berry requirements, 25 percent of their vegetable and melon requirements and all of their potato requirements.

One can only envy the energy which these workers expend in behalf of their homes and families. Here it is by no means an accident that the cropping power for many crops surpasses to a considerable degree that being achieved at kolkhozes and sovkhozes. For example, according to the data for 1986, the cropping power for pip type fruit (apple trees, pears and quinces) on all types of land tracts exceeded that for kolkhozes and sovkhozes (in quintals per hectare) by 51.2 percent. The cropping power for stone fruit (cherries, sweet cherries, apricots, plums) and for berry fields (raspberries, strawberries and garden strawberries) turned out to be higher by 7.4 and 23.9 percent respectively.

And what is the situation with regard to buildings in the vicinity of the plots? Roughly 3.4 percent of the families have winter cottages, 72.6 percent — orchard buildings or summer cottages, 15.6 percent have barns and 24 percent do not have roofs.

With regard to the last category of people, the results of the study revealed the following: 41 percent of them blamed the absence of buildings on the difficulties involved in acquiring building materials, 22 percent — on insufficient monetary funds, 21 percent believe that there is no need to erect any buildings since their tracts are located alongside their residences and 16 percent referred to difficulties in the organization of construction and to other factors.

It is no secret that the erection of a building on a plot is still an extremely complicated undertaking. Those families which experienced difficulties in acquiring construction materials referred to shortages in boards (28.9 percent), logs and squared timber (15.7), chipboard panels and orgalite (12.3), cement (20.1), bricks (19.9), water supply lines (13.1), posts (13.6) and metal grating for fencing (14.9).

Obviously the solutions for these problems will make life considerably easier for those who apply themselves seriously to collective horticulture and gardening.

As a result of efforts by Moscow's transport workers, the summer residents had horticulturists have been released from their traditional spring concerns associated with the transporting of furniture, implements, construction materials and fertilizer beyond the city. Mostransagenstvo has concluded a contract with Motor Vehicle Combine No. 32 for the use, on Saturdays and Sundays, of machines which earlier lay idle.

Orchard, Gardening Associations

18240068a *IZVESTIYA* in Russian 21 Feb 88
p 2

[Article by V. Gavrichkin: "One's Own Orchard and Garden"]

[Text] In all probability it is already clear from the title that although our review is agricultural, we have in mind today the agricultural labor of city-dwellers. These are

individuals who are members of collective horticultural associations, who have drawn themselves closer to agriculture and who are persistently mastering or who are recalling the forgotten skills of farm labor.

This movement, following the well known party and governmental decisions, assumed such a scope that it was impossible to monitor it even with the aid of statistics. Here are just a few significant figures. In 1970, 7.3 million families had land tracts associated with orchard and gardening associations and they managed an overall area of 516,000 hectares. After 10 years had elapsed, these figures amounted to 9 million and 622,000 respectively. At the present time, 12.6 million families have orchards and gardens and their overall area of land utilization has increased to 811,000 hectares.

It bears mentioning that I have used the term "at the present time" in an extremely abstract sense, since unfortunately USSR Goskomstat [State Committee for Statistics] still does not have the mentioned figures for 1986. But it is believed that it has at its disposal data for 1 January 1988 and for today and that this data has become hopelessly out of date. Recently I paid a visit to the Zagorsk Municipal Executive Committee in Moscow Oblast and saw for myself: the land managers were literally falling all over themselves in their search for new tracts of land for collective horticulture. Not a day goes by but that a new collective is born. The associations are growing like mushrooms following a rainfall: in those areas where yesterday there was an exhausted quarry, a wasteland or swampy lowland, today handsome out-buildings are being erected or fencing installed, on the other side of which young plants are sprouting forth.

Thus it makes no sense to guess how many orchard and gardening associations we have at the present time. One other fact is clear however: when the count of families having plots of land reaches the second ten million mark and the land they are using reaches approximately 1 million hectares, then we will have a serious social and economic phenomenon on our hands, one which must be understood thoroughly.

In striving to obtain a more complete picture, USSR Goskomstat, in studying the family budget of workers, recently conducted a one-time sampling study of 5,000 city families consisting mainly of manual and office workers who were engaged in horticulture and gardening work. I will cite only a limited amount of data. Of the number of families interrogated, 55 percent have orchard tracts, 31 percent — garden plots, 1 percent — summer plots and 13 percent — tracts attached to homes in rural areas or located on wasteland. Whereas gardeners plant potatoes on 95 percent of the land assigned to them, the horticulturists operate on the basis of an entirely different plan. They use only 41 percent of their tracts for potatoes, 39 percent for fruit and berry plantings and vineyards, 17 percent for vegetables and melons and 3 percent for flowers and other crops. The average size of a tract is five hundredths of a hectare.

It would seem that this is a rather small plot. But then there is the yield. The harvest of pip fruit (apple trees, pears, quinces) and berries (raspberries, strawberries and garden strawberries) for the amateur horticulturists is greater by more than a factor of two than that being obtained at kolkhozes and sovkhozes. The stone fruit crops (cherries, sweet cherries, apricots and plums) are also considerably more productive. By means of their own plots, the families of manual and office workers satisfy completely their potato requirements, their fruit and berry requirements by 50 percent and their vegetable and melon requirements by 25 percent.

The satisfaction of these requirements is obviously linked to the seasonal nature of the work and to the inability to preserve all of the crops grown. For example, based upon the data obtained from the study of families, I tried to compute the overall production of products. The figures obtained were quite impressive. For example, more than 700,000 tons of fruit and berries were harvested by the horticultural associations alone. Moreover, by no means was all of this consumed by the families. The horticulturists sell or turn over to relatives and friends approximately 17 percent of their fruit and berries. This is roughly 120,000 tons and even more is obtained by those gardeners who grow fruit and berries.

In short, the organizations of consumer cooperation, other cooperatives, public catering enterprises and kolkhozes and sovkhozes must devote fixed attention to the orchard and gardening associations and make them their partners for the sake of overall profit. Here it is believed that there should be mutual interest. Unfortunately however, we have yet to see any worthwhile steps being taken, especially by those organizations interested in the output.

A second problem is clearly obvious. It is associated with the construction and improvement of orchard tracts. Let us turn our attention towards this problem: 40 percent of the families — this is already the spirit of the times — have possessed tracts of land for 5 years or less. And the overwhelming majority of their number do not have any structures on their tracts and many of them — not even a simple shed. True, we can eliminate those who live close by (21 percent) and thus do not need any structures. But the remaining ones wish to have them. However, they are unable to purchase the required construction materials and some are unable to erect structures using their own resources.

This is the question of questions. If the orchard and gardening associations are growing in the manner of mushrooms, the problem concerning their proper equipping should not be resolved in an amateurish manner. Tracts of land should never be presented to millions of people in a manner which suggests that their fruitless searches for boards, brick, cement and many other materials are programmed. Nor is the situation any

easier in connection with the construction of water supply lines, wells, water supply wells, electric power networks or gas supply networks.

I admit that I was initially surprised by the rather low demand for finished orchard structures. It is obviously a case of many being frightened by the cost involved. Although at the present time the amount of credit available for building purposes has been increased, still 22 percent of those interrogated claimed that they are not building structures because of "insufficient monetary funds." (In this same Zagorskiy Rayon, I was told: the purchasing of a finished structure, the delivery, the installation of a basement and the assembly cost more than 6,000 rubles). A question automatically arises: is everything here favorable with regard to price formation and the quality of the services rendered?

Actually, many such questions have accumulated. Up until now, there has been one such chief question: how can a tract be obtained? Today, with millions of families becoming owners of plots six hundredths of a hectare in size and their number increasing rapidly, the time is at hand for resolving all of the remaining problems.

These solutions must be obtained while bearing in mind that horticulture and gardening, in addition to all of their other advantages, also offer areas for the recreation of personnel, recreation which makes it possible to eliminate considerably the problem of free time. As revealed by the interrogation, almost one third of the manual and office workers worked more than 40 weekend days on their orchard tracts and for many of them the tracts became areas where entire families spent their free time.

Credit for Gardeners

18240068a Moscow SELSKAYA ZHIZN in Russian
29 Mar 88 p4

[Article by V. Sautenkov, chief of the Department for Long Term Credit of the Credit Administration for Consumer Needs of the Population of the USSR Savings Bank: "Credit for Gardeners"]

[Text] "Up until recently, the members of horticultural associations could obtain a state loan in the amount of 3,000 rubles. At the present time, they are stating that the amount of such loans has been raised. To what amount? And can such loans be utilized by those who have already obtained credit from the state?" These questions were asked by A. Kiryanov in the Altay Kray.

Horticulturists and gardeners, upon commencing the construction of a garden outbuilding or the development and improvement of a tract assigned to them in a horticultural association, willingly take advantage of state loans. In the absence of such loans, it is simply impossible to build upon or improve a plot.

Earlier, a loan was issued in the amount of 3,000 rubles. Today its amount has been increased. The 19 September 1987 decree of the CPSU Central Committee and the USSR Council of Ministers entitled "Additional Measures for Developing the Private Plots of Citizens, Collective Horticulture and Gardening" calls for the issuing of credit for the acquisition and construction of gardening outbuildings and for improving a gardening plot in an amount up to 5,000 rubles. This credit is paid off over a period of 10 years, commencing with the third year following the date on which it was obtained. But what is the situation for those horticulturists who obtained loans in accordance with the system which prevailed earlier? When needed, they can obtain an additional loan, but its overall amount must not exceed 5,000 rubles.

What is the system employed for the issuing of loans? They are issued by branches of the USSR Savings Bank. The obtaining of a loan can be arranged through the enterprise where a horticulturist works or based upon his personal responsibility at his place of residence. Credit for the population is presented by branches of the Savings Bank (they are now referred to as the former central savings banks).

If a loan was obtained in accordance with the system employed earlier by a branch of Gosbank, then an additional loan must be obtained from that branch of the Savings Bank to which the documents for the issuing of credits to individual borrowers were transferred by an institute of Gosbank.

In order to obtain credit, a borrower presents a request for the issuing of an additional loan. The obligations of the borrowers with regard to paying off their loan indebtedness are formulated in the established manner, with the schedule for making payments on the old loan remaining unchanged. The additional loan is also issued on the basis of repayment within a period of 10 years, with payments commencing the third year following the date on which it was obtained.

An additional loan is issued to a gardener upon the condition that he presents recognition by the administration of the horticultural association attesting to the need for work to be carried out in connection with the construction of a farm unit or a hothouse and also for the carrying out of other work concerned with improving a garden tract.

Construction of Farm Buildings Discussed

18240068a Moscow SELSKAYA ZHIZN in Russian
26 Apr 88 p4

[Article by Yu. Shuplyakov, chief of the Legal Department of USSR Gosagroprom: "In the Interests of Horticulturists"]

[Text] What changes have been introduced in the sizes of garden outbuildings, hothouses and farm structures and also in the system for the use of garden plots? Such was the question asked by N. Starkov in Ivanovo Oblast.

Up until recently, considerable restrictions were imposed in connection with the development and improvement of tracts operated by the members of horticultural associations. In essence, a private builder did not feel that he was the authorized master of his tract. This paralyzed his initiative and enterprise. A solution was needed for this urgent problem. And on 31 March 1988 the RSFSR Council of Ministers, in coordination with the AUCCTU, approved a new Standard Regulation for Horticultural Associations.

At the present time, the floor space of a gardening outbuilding has been expanded by twofold and the limitations with respect to the dimensions for terraces, farm structures, basements and hothouses have been eliminated completely. No regulation has been imposed in connection with the height of a gardening outbuilding or farm structure. The members of horticultural associations are authorized to erect heated gardening outbuildings on the land tracts made available for their use, with the building area ranging up to 6 square meters, not counting the areas for terraces (verandas) and attics and also farm structures (individual units or interconnected) for the maintenance of poultry and rabbits, the storage of farm implements or for other needs. Hothouses and other heated ground installations may be erected on a plot for the cultivation of agricultural crops. Basements are authorized to be installed under homes or farm buildings.

The construction of garden outbuildings and farm buildings on land tracts is carried out in accordance with standard or private plans in conformity with the plan for organizing and developing the territory for a collective orchard.

The dimensions established earlier for tracts presented to the members of horticultural associations, ranging from 400 to 600 square meters, are retained in the new regulations. Those large tracts which were allocated on the basis of earlier legislation remain without change.

However, members of associations which were allocated large tracts by agreement with the executive committee of a rayon or municipal soviet of people's deputies, on the territory of which the association is located, are authorized that portion of a large-size tract which will return it to the established minimum size (400 square meters). A gardener may also divide up such a tract, provided the mentioned requirements with regard to their size are observed, for the purpose of presenting one portion to a member (former member) of his family, who will utilize the garden tract jointly with him. The exchange of a garden tract for a tract in another horticultural association, for the purpose of moving closer to one's place of residence or for other acceptable reasons, is authorized based upon a decision handed down by the administration of the trade union committees of enterprises or the executive committees of rayon or municipal soviets of people's deputies, provided the association lies within their jurisdiction and taking into account the recommendations of the association administrations.

The norm according to which a gardener is obligated, over the course of a 2 year period, to carry out the required plantings on his garden tract and to use it in a highly efficient manner for the production of fruit, berries, vegetables and other agricultural products is retained in the regulation.

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POLICY, ORGANIZATION

Reforms in Wholesale Trade Sector Urged

18270048 Moscow SOVETSKAYA TORGOVLYA in Russian No 3, Mar 88 pp 2-5

[Article by S.Ye. Sarukhanov, USSR trade minister, Moscow: "Wholesale Trade Under the New Conditions"]

[Text] Under the present conditions of the sector's development as the intermediary and active organizer of commercial relations between retail trade and industry, wholesale trade is called upon to play the principal role in balancing the production of goods in volume and assortment with the demand of the public. Fulfillment of all the indicators of economic performance promoting the successful sale of goods to the public must be subordinated to this.

Management authorities of the trade sector, wholesale organizations, and enterprises must accordingly improve the forms of relations with industry constantly and apply more effective methods of exerting pressure so that it works on behalf of the ultimate goal—satisfying the growing demand of the public and fulfillment of the target for retail sales.

In recent years a more vigorous effort has been made with industry to seek out additional resources, to expand and renew the assortment, and to improve quality; as a result there has been some improvement in the supply of a number of consumer goods to the public. The material and technical base of wholesale trade has been developing by virtue of construction and reconstruction of warehouses for general goods, and the adequacy of equipment has been improved. In many wholesale enterprises dispatcher services have been set up and a system introduced for guaranteeing uniform regularity in the supply of commodities to the retail trade network. Retail trade organizations have been receiving larger deliveries in sorted and packaged form. At the same time, the state of development of wholesale trade is lagging behind the demands of the times. Its operation is in need of radical restructuring so that the retail trade network is regularly and uninterruptedly supplied goods in the necessary assortment, so that it exerts a more vigorous influence on industry to increase its output of high-quality goods for which there is a public demand and also goods from local raw materials and production waste.

That is why the problems in the wholesale trade link are problems central to the domestic market for consumer goods. They are complicated and important because the performance of the wholesale link is at the focus of economic relations between production and consumption. Wholesale trade organizations and enterprises (associations, offices, and depots) must be active organizers of the movement of goods and must aggregate

demand and build up a supply of commodities on the commodity markets of their respective regions and on the scale of the country as a whole.

Since wholesale trade represents a form of relations between socialist enterprises, the efficiency of operation of wholesale enterprises is directly related to the state of the economic mechanism in the country and to the progress of its restructuring. It is very important to mention this, since today and tomorrow it is not and will not be organizational and technical factors that figure as the principal cause of serious shortcomings in the operation of wholesale trade enterprises, but the imperfect nature of economic relations on the country's domestic market and in the way economic relations are organized between wholesale enterprises and industry.

It is well-known that the organization of wholesale trade and its material and technical base are in need of radical improvement, but the search for optimum organizational forms of wholesale trade must be conducted in the mainstream of restructuring economic relations, of the transition to economic methods of managing the production and trade of consumer goods.

At the present time, wholesale trade organizations and enterprises are performing their inherent functions poorly. There is no true commercial work done: There is little study of demand, flagrant mistakes are made in determining the amounts of goods required by the market served, unexactness in relations with industry is typical, as it is for retail trade to have the goods actually produced imposed on them, whereas under the new operating conditions only what sells is to be produced. As a rule, wholesale depots render various services to retail trade organizations and enterprises unsatisfactorily: They do not handle the necessary sorting and grading of goods or the making up of lots to be delivered, and they allow considerable irregularity in deliveries. That is why commercial personnel of retail trade look adversely on wholesale enterprises as suppliers of goods and are trying to make the transition to direct relations with producers even where such relations are objectively inefficient.

Economic indicators and the financial condition of wholesale trade enterprises are not as dependent as they should be on the change in conditions on the market. When the market goes soft, and excessive inventories of merchandise are formed as a consequence, the main burden lies on the retail trade link. The share of the inventories of the wholesale link in their total volume has not exceeded 20 percent for many years, and at the same time the dynamic behavior of merchandise inventories and sales of wholesale enterprises do not reflect the real situation on commodity markets. The scattering of most commodity inventories over hundreds of thousands of stores and very small storehouses belonging to retail trade make it impossible to make up the trade

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assortment properly, maintain it constantly in the retail trade network and move commodity resources efficiently in accordance with public demand.

The adequacy of storage area and volume is considerably below the standards in effect and is not meeting the requirements of up-to-date organization of the movement of goods; the share of storage facilities which are dilapidated and unsuitable for storing commodities is very high, and manual labor predominates in warehouses; most wholesale enterprises do not have up-to-date equipment for gathering and processing information, which is why primitive and outdated methods of analysis, planning, and operational management are used.

The lack of confidence in wholesale depots of suppliers of goods, along with shortcomings in the commercial work they do, is forcing retail trade organizations to provide themselves with their own warehouse operation even in those cities where wholesale depots have warehouses, and in this they receive support from local authorities in the management of the trade sector. This means a scattering of capital investments, it increases the number of very small storage facilities which are unsuitable for an up-to-date technology in the movement of goods, and the costs of maintaining commodity inventories are higher, since storage of commodities in the retail link is 2-3-fold more expensive, not to mention the fact that it detracts from formation of the assortment in retail trade.

All of these serious shortcomings have for a number of years evoked quite a few contradictory proposals as to the restructuring of the wholesale link and its organizational structure.

There is no question that the activity of wholesale trade enterprises must be directed toward performance of three basic tasks: improvement of work with industry, improvement of the supply of commodities to retail trade, and an increase in the income of wholesale enterprises. All of this was reflected in Order No 218 of the USSR Ministry of Trade, which was entitled "On Measures To Improve Wholesale Trade and Its Management Structure" and is dated 18 September 1987.

One of the central problems in the activity of the main administrations, administrations, and departments of the USSR Ministry of Trade, trade ministries of union republics and their wholesale organizations and enterprises is deemed to be further improvement and development of wholesale trade on the basis of the decisions of the June (1987) Plenum of the CPSU Central Committee, the USSR Law on the State Enterprise (Association), and the decree of the CPSU Central Committee and USSR Council of Ministers dated 17 July 1986 concerning improvement of the economic mechanism in the trade sector. The first instruction the order contains is to see that the structure of management of wholesale trade is restructured on the basis of progressive forms

and methods of operation of wholesale organizations and enterprises, which would be aimed at enhancing the role of wholesale trade in uninterrupted supply of the necessary goods to the retail trade network, closer linkage of planning targets for delivery of goods to retail commodity sales, and greater responsibility for fulfillment of those targets.

Further improvement of economic relations between wholesale organizations and industrial enterprises and enhancement of the role of wholesale trade fairs and contracts concluded at them must in fact guarantee that greater pressure is put on production with a view to fuller satisfaction of the orders of the trade sector.

Performance of these tasks requires that wholesale depots be fitted out with new equipment, that they undergo reconstruction, that the technology of their warehouse operations be optimized, that warehouse facilities be utilized more efficiently, that materials-handling operations be mechanized, that a progressive technology for commodity supply be introduced, that conditions be brought about to build up and sort the assortment of goods, and that the supply of commodities to the retail trade network be improved.

The order called for using progressive designs to build highly mechanized wholesale depots and warehouses for general goods, that would be equipped with the necessary technological and materials-handling equipment, as well as equipment for communicating and exchanging information with suppliers and customers. Over the period 1987-1990 a package of measures will be carried out to create in the system 20 large-scale highly mechanized and automated enterprises meeting the requirements of scientific-technical progress. It is also very important that wholesale depots be optimally located within the union republics, krays, and oblasts, that the most optimum systems be introduced for the movement of commodities, precluding unnecessary hauling and transshipment of goods, the rendering of a broad range of services to retail trade enterprises aimed at improving the trade process and raising the level of customer service.

The trade ministries of all the union republics face important tasks in improving the operation of wholesale trade. It was proposed that in 1988 the organizational structure of the wholesale link be revamped and the transition made to new and more progressive forms of organization of wholesale trade on the basis of local conditions and particular features of development.

In the union republics it was recommended that republic wholesale associations be organized for the trade in foodstuffs, products of light industry, durable consumer goods and housewares, and clothing accessories by consolidating commodity administrations (departments) of trade ministries and other subdivisions as well as wholesale organizations and enterprises, and optimum commodity specialization and consolidation should be carried out within those associations.

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These associations must engage in a commercial effort with industry in order to shape and submit requests and orders, to organize wholesale trade fairs, to guarantee the supply of commodities to trade organizations and enterprises within a particular region regardless of departmental subordination, and also to perform interrepublic, interoblast, and all-union deliveries of commodities. The specialized republic wholesale associations (offices) which are now operating would at the same time be abolished.

Oblast (kрай) wholesale enterprises are to be gradually turned over to direct subordination of trade administrations of oblast (kрай) ispolkoms, while these enterprises would at the same time retain their functions in wholesale sales. This will facilitate a better combination of the interests of retail trade and wholesale trade on behalf of the ultimate goal—satisfying the public demand for goods.

The order called for concentrating warehouse management in the wholesale link before 1 July 1988 by transferring warehouses of shopping centers, retail trade enterprises, wholesale organizations, and other systems located in the same city. Every wholesale enterprise would have to guarantee efficient use of warehouse space; to that end, should it be necessary, provision was made for a systematic specialization of goods warehouses and for proper assignment of warehouse personnel and other personnel. Conditions must be created in this connection for application of progressive technology and to mechanize warehouse operations and materials-handling operations. To that end there is a need to take up the questions of creating independent cost-accounting enterprises for the operation of warehouses, of supplying them with store equipment and processing equipment, of repairing that equipment, of seeing to the resupply of equipment and reconstruction, and of performing forwarding and other jobs as a service to wholesale enterprises.

This would make it possible to raise the level of operation of wholesale enterprises (organizations) in building up orders for production and delivery of consumer goods based on a thorough study of market demand and particularly the conditions on commodity markets. Personal responsibility has been placed on the heads of trade ministries of the union republics and wholesale enterprises (organizations) for the soundness and correctness of determination of the need for commodities necessary to satisfying public demand and above all goods for children, young people, and the elderly. It is very important to guarantee constant improvement of the organization and conduct of city, oblast, and republic wholesale trade fairs at which the foundations are laid for planning the assortment and quality of goods to be produced by every production association (enterprise).

There has to be free selling and buying of goods at these fairs, and contracts also have to be concluded for their delivery for nationwide purposes, subject to interoblast and interrepublic plans.

Production associations (enterprises) in the industrial and consumer service sectors and cooperatives for manufacturing goods must take part in the fairs in order to increase the output and delivery of commodities in the necessary volume and assortment, including products from local raw materials and waste from the principal production operation, as well as products from subsidiary operations.

At the same time, higher requirements should be imposed on suppliers in the examination and selection of samples of goods which are for sale at wholesale trade fairs in order to broaden and freshen the assortment and to improve the quality and external appearance of goods, better models should be put into production, and broader use should be made of progressive types of containers, packaging, labeling, and methods of shipping goods.

In short, in the mechanism of the trade sector's relations with industry there should be substantial improvement of the operation of trade fairs at all levels, since their role in shaping production plans in keeping with public demand will grow constantly.

In 1988 the transition of industrial enterprises will be completed to direct long-term contract relations with department stores, shopping centers, specialized stores and manufacturers' outlets, and other organizations within the limits of the republic, the oblast (kрай), the city, or region, bypassing intermediate links.

The heads of wholesale enterprises (organizations) have a duty to constantly monitor progress in fulfillment of delivery contracts concluded, achieving full observance by suppliers of obligations related to the volume, assortment, and quality of goods delivered, shipping dates, and the regularity of shipment.

Closer linkage and balance should be guaranteed between the volume of delivery of goods to wholesale organizations and the plan for retail commodity sales. When these deliveries are planned, provision should be made for the volume of additional commodity resources obtained from the growth of production, decentralized purchases of goods, the clearance of commodity inventories, and other sources necessary to fulfill the retail commodity sales plan.

When deliveries are being planned according to the forms of commodity movement (warehouse and transit), warehouse commodity sales need to be developed for goods requiring delivery in sorted form and in a composed sales assortment, and also transit deliveries, especially for goods which are large in size, technically sophisticated, and other goods, using direct settlement between suppliers and customers. This will make it

possible to guarantee more optimum location of commodity inventories between wholesale and retail enterprises and constant availability in warehouses of wholesale enterprises of a quantity and assortment of goods sufficient for promptly breaking them down for the retail trade network.

Particular attention should be paid to increasing the responsibility of wholesale enterprises for the proper stock of goods in warehouses and in the retail trade network on the basis of approved lists, and adherence to the commodity list should be taken into account in awarding bonuses for the final results of operation.

The list of sufficient commodities compiled for each 6-month period by trade ministries of union republics (not divided into oblasts), trade ministries of autonomous republics, and trade administrations of oblast (kray) and city ispolkoms jointly with wholesale trade organizations and enterprises has been approved for this purpose. These lists must be sent before 1 October and before 1 June to retail trade organizations so that assortment lists can be worked out for stores. If necessary, amendments and supplements may be made in this list.

Managers of wholesale and retail trade enterprises and organizations have a duty for which they are personally responsible to see that the list of sufficient commodities is promptly reviewed and approved and that these goods are always available in the salesrooms of stores. The instruction now in effect on drawing up lists of sufficient commodities for stores is being rescinded.

It has been proposed that before 1 February and 1 June the volume of inventories of goods of the spring-summer and fall-winter assortment be determined annually jointly with wholesale organizations (enterprises) in order to organize the seasonal sale of goods. Particular attention should be paid here to goods in the school assortment, sporting goods and clothing, products for recreation and tourism, and other goods in view of local conditions. It has been established that industrial goods delivered from warehouses of wholesale enterprises and not sold in the retail network over a period of 3 months are subject to return to those wholesale enterprises at the retail prices in effect, while commodities covered by a guaranteed period of time for storage or marketability are returnable to other commodity organizations before expiration of those dates.

Trade ministries of union republics must complete in 1988 creation of dispatcher services at all wholesale trade enterprises to ensure that goods are shipped promptly to the retail trade network. Provision has been made to introduce at every wholesale enterprise in 1988-1989 a system for guaranteeing the regularity of commodity supply to the retail trade network by organizing uniform (scheduled) delivery of goods to stores in sorted and made-up form.

Nonfood goods which have been ordered or selected must be delivered to stores by the agreed date, but no later within a 3-day period to customers in the same city and a 5-day period to customers in another city. It is being made the duty of wholesale enterprises to guarantee supply of relevant industrial goods in the necessary volume and assortment to supermarkets and large food-stores. So that wholesale enterprises within a republic and enterprises of other union republics might obtain information about commodity surpluses and shortages and might be able to promptly move resources where they are needed, it has been proposed that lists of these goods be drawn up for information purposes and issued at least once every half-year beginning in 1988.

A special list has been approved of services to be rendered by wholesale enterprises to the retail trade network on a contract cost-accounting (khozraschet) basis. Contracts with industry and retail trade must indicate specific obligations in rendering these services, the amount of their payment from the cost-accounting income of the contracting enterprises, and penalties for nonperformance of the relevant contractual obligations.

A month before the wholesale trade fairs begin every year the list of commodities reported by USSR Mintorg for evaluation of the performance of associations, enterprises, and organizations to wholesale trade within the system of USSR Mintorg in performing obligations related to product deliveries may be supplemented and expanded in accordance with the contracts concluded. The level of demand, local conditions, the seasonal nature, and level of importance of deliveries of particular goods to the trade network in the right assortment and by the agreed date will be taken into account here.

It is very important to carry out a number of measures envisaged by the order concerning technical progress in the wholesale link. To that end, in the period 1988-1990 wholesale trade enterprises will be rendered broader services in organizing technical servicing and repair of mechanization equipment, display containers, shipping containers, electric outdoor transportation, wrapping and packaging equipment, ventilating systems, and electronic registers and scales.

The network of wholesale depots will be expanded through construction and activation of large wholesale trade depots by the end of the 12th FYP amounting to 555,000 square meters, including 150,000 square meters in RSFSR, 90,000 in UkrSSR, and 72,500 square meters in UzSSR.

At the same time, plans call for developing the material and technical base of shops for wrapping groceries so that by 1990 the share of mechanization in wrapping will be as high as 65 percent of the total amount of grocery articles in trade shops. At the same time, in LiSSR it is to amount to 95 percent, in GSSR 90 percent, in LaSSR and ESSR 85 percent, and in BSSR, MSSR, and TuSSR 70 percent.

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In order to substantially reduce the standing time of vehicles in loading and unloading operations round-the-clock loading and unloading of goods will be organized at wholesale enterprises, and areas will be equipped to receive general-purpose containers in order to increase the volume of container shipments.

Wholesale enterprises are required to guarantee an annual growth of at least 4-5 percent in the volume of delivery of consumer goods in containers and in packaged form.

In order to raise the level and responsiveness of management of wholesale enterprises and on behalf of comprehensive application of the methods of mathematical economics and computers to the practice of merchandising, the results of wholesale trade fairs have to be processed automatically on the basis of the favorable experience with this effort in certain trade ministries of union republics and other trade systems, existing automated systems for management of wholesale trade should be developed and new ones created.

On behalf of fulfillment of the tasks which have been set to improve wholesale trade the main commodity administrations of the USSR Ministry of Trade must annually examine the requests of union republics in accordance with the established schedule and make a decision on their soundness, taking into account figures on the sale of goods, the level of inventories, and other factors reflecting the market conditions for the trade of those commodities in the republic. There must be a regular search for additional commodity resources in the necessary assortment, especially goods for children, volume goods, as well as new and particularly fashionable products. The improvement of wholesale trade fairs must be directed toward increasing their role in shaping production plans so that they correspond in the assortment and quality of goods to the requests of the trade sector and public demand.

Wholesale trade enterprises (organizations) must be given a great deal of assistance as to methods of studying the needs of the market and public demand by VNIIKS and its branches, jointly with the main commodity administrations of the USSR Ministry of Trade. Research and development should be broadened, above all of forecasts making it possible for wholesale enterprises and trade ministries of union republics to obtain a more correct orientation concerning the state and prospects for development of public demand for particular commodities in drawing up orders and requests and in making purchases at wholesale trade fairs. In developing methods of studying demand in wholesale trade consideration must be paid to the directions of the restructuring of organizational structures of the wholesale link under the new economic conditions.

In order to stimulate the development of warehouses turnover, simultaneously with the general review of trade discounts and wholesale-sales discounts in 1990,

the question of differentiation of wholesale-sales discounts should be decided with USSR Goskomtsen for the types of trade turnover (warehouses, transit (to different cities) with involvement in settlement).

On behalf of fulfillment of assignments for improvement of wholesale trade, every effort should be made to disseminate the progressive experience in merchandising of wholesale enterprises (organizations), in improving economic relations with industry and retail trade enterprises, and in improving the movement and sale of commodities.

Performance of all these measures will yield the desired results only if they are organically incorporated into the new economic mechanism, if the personnel in the sector perceive them not as just another instruction from above, but as a decision that summarizes vitally necessary changes in one of the most important areas of society's socioeconomic sphere.

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07045

Reorganization of Trade Market Discussed 18270051 Moscow SOVETSKAYA TORGOVLYA in Russian No 4, Apr 88 pp 9-10

[Article by A. Orlov, Director of VNIIKS [All-Union Scientific Research Institute for the Study of the Population's Demand for Consumer Articles and Trade Competition] and doctor of economic sciences: "The Development of a Market and Trade: the Turning Point." This article is the conclusion of an article begun in issue Number 3, 1988 of this journal.]

[Text] Already in the first year of the assimilation of the new management conditions various possibilities have appeared for trade ministries regarding the formation of a centralized fund of financial resources and reserves. Ministry expenditures are carried out for the purpose of specific scientific research through this fund on the basis of the order-contract system. As we know, the branch's scientific institutes were transferred to complete cost accounting and self-financing as of 1 January 1988.

According to the USSR Law on the State Enterprise (Association) institutes are producers of goods which sell scientific products at contract prices. The need for such products must be proven not through general discussions but through work that has practical significance and that is economically effective.

VNIIKS affiliates are being transformed into cost-accounting scientific centers for the study of the regional market. Work with the head institute is built on a national theme on the basis of orders (norms) that will remain stable until the end of the five-year plan. The cost-accounting stability of the majority of the republic's

VNIKS affiliates depends to a large extent on economic and organizational integration with wholesale trade enterprises. Without a full portfolio and a reserve of orders until 1990 curtailments or even the self-liquidation of affiliates are unavoidable.

In 1988 we must achieve new quality in economic growth; growth in and discovery of potential in restructuring must be more dynamic. Structural and technological changes within the agroprom [agro-industrial association] (agriculture and raw materials and processing links), machine building and light and chemical industry must create better conditions for developing real marketable resources. They are essential for achieving a general volume of wholesale commodity turnover in state and cooperative trade equalling 363 billion rubles. A very high index has been built into the plan of economic and social development. Its growth to the expected size of commodity turnover for 1987 can equal over 20 billion rubles. Such is the growth in sales volume arising from the correlation of the most important economic indexes¹ and specific socio-economic tasks for 1988 and for the entire five-year plan with a consideration of state orders for commodity turnover. In order to increase the degree of market stability and balance, growth in the physical mass of goods and the regulation of retail prices according to the demand structure, the actual renewal of products and the degree of improvement in the product assortment and quality is of great importance. With more thorough structural and assortment changes in production, a significantly higher pace for revitalizing production and for improving its quality (to the level of being competitive in the international market) a relatively smaller physical mass and monetary volume of retail commodity turnover will be required with the same criteria for satisfying the population's demand. In this way the load on sellers will decrease and the quality of commercial services to the population will improve.

The role of union and autonomous republics and local organs is increasing with regard to the saturation of the market and responsibility for balanced supply and demand. In particular, it is important to use existing resources to develop union and regional local markets of timber and other building materials and to achieve free trade of these products everywhere. In 1986-1987 on the whole the amount of turnover in this market increased by a factor of almost 1.7 in comparison to 1985.² Right now this is the most dynamic market, in the organization of which the leading role is moving from USSR Gossnab [State Supply Organization] to USSR Mintorg [Ministry of Trade] and the mintorgs of union republics. The determining factor in this market's development will be the wholesale link. This will occur if with the help of complete cost accounting it takes control of strong key factors such as an active assortment and organizational-technological policy. First and foremost this includes prices, wholesale-market and trade discounts, increased sanctions, the essential capital for developing the material-technical base of the storage industry, retail trade

with essential means of transportation and other services. (Here the active role of local organs and cooperatives is important).

In the assortment policy of union republics and regions it is essential to implement, with the aid of wholesale trade enterprises and associations, a decisive line directed at thorough changes in the production structure for producing clothing, footwear and knitted goods. We are speaking about increasing production of children's clothing and footwear already in 1988-1989 by an average of a factor of 1.3-1.5; of these types of articles for elderly people — by a factor of 1.5-1.6, and for young people — by a factor of 2-2.5 (while preserving prices that are accessible for these groups of the population even in the face of the required regulation of goods under cost-accounting conditions). More serious structural changes in assortment and commodity turnover will occur with the introduction of new procurement, wholesale and retail prices and discounts already during the 13th Five-Year Plan.

In the interest of strengthening balance in demand and supply in monetary form, it is planned to increase production in most union republics and oblasts (krays), especially of fashionable goods according to contract prices (with the inclusion of cooperatives). The striving toward balance in monetary form does not have to exacerbate conflicts in connection with the necessity to increase the production of goods, the prices of which will be accessible for mass groups of purchasers who are a social priority — children, the elderly and young people. It is in republic and regional markets that possibilities for real structural-assortment balance of demand and supply will be determined to a great degree — for specific groups of commodities and types of consumers. Here an important role, based on the principle of social justice, will be played by the assortment concept related to goods in the young people's assortment and goods for children and the elderly that are being introduced in light industry and trade according to the joint order of ministries. These concepts are being assimilated on the basis of the experience gathered in the GDR, the CzSSR and the NRB.

Problems related to the quality of goods are being dealt with on a regional level. Thus, in Latvia, within the framework of the specific-function scientific-technical program, Kachestvo-90 [Quality-90], 65-70 percent of the assortment is replaced annually at the Avrora Knitting Factory, for example, and a unique multi-level system has been developed to achieve good product quality. It includes quality groups with initiative in brigades and shops, design bureos and the management apparatus. As a result the number of complaints coming from trade organizations and enterprises has been reduced almost to zero.

The solution to the problem of quality leads to a saturation of the market while there is a smaller volume of commodity turnover. In this case there is a change in the

role of the volume of retail commodity turnover (which is in principle the guide to production volume) as the main plan index in trade. Accelerated turnover, the completeness of the assortment and the quality of services and goods will replace it.

We can cite examples of solutions to the problem of quality in which marketing is utilized as the international market demands.

This includes the work of Finnish partners of the Marat Association with Factory imeni Klimenti in Tallinn as well as work between the French firm, Vestra, and the Bolshevik Sewing Association. This is how the Zarya Footwear Association of Moscow, the Moskva Sewing Association and the Avrora Knitting Factory in Riga operate.

Of interest is the work of the Bulgarian associations — Ruyen (knitting), Pirin (footwear), and Rila (sewing) — and the Center of Fashion and New Merchandise in Sofia. Together with their managers of firm stores they voluntarily belong to the Industry for Man Association as independent goods producers. There has been a sudden expansion in the production and sale of small sets and luxury items, especially of fashionable goods and up-to-date items according to the criteria of the international market. The opportunity has arisen to earn hard currency through active work in the European market (in the FRG, England, France and Greece) and to form the corresponding funds. The problem of expanding and replacing the assortment of men's shirts, trousers, suits, raincoats (of a youthful, fashionable style), women's footwear, toiletries, fashionable blouses, dresses and so forth is being dealt with flexibility.

A system has been developed for the rapid circulation of information from international exhibitions (markets).

Cooperatives and individual family forms of labor operations will facilitate a solution to the problems of renewal and quality of goods on a competitive basis.

Services in wholesale bases involved in studying demand, oblast (city) trade administrations, retail associations (firms) and univermags [general stores], and in the capitals of union republics — republic centers for market studies and VNIIKS affiliates³ should help them with information and orientation.

Cooperatives for the production of goods and trade cooperatives are interested in leasing storehouse capacities in wholesale facilities and space in univermags and specialized stores as well as in markets and at fairs.

The mutual advantage of integrating cooperatives with trade enterprises must be calculated ahead of time as required by the cost-accounting management of operations. As a result we should expect the development of new types of trade enterprises. One of the paths of development for GUM and Detskiy Mir [Children's

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World Department Store] in Moscow, for example, involves the creation within them of small cooperative enterprises for the production of goods and services to buyers.

Cooperatives which will find their place in the market will strive for mutual support and for the development of their own associations (unions). It is very important that these tendencies be supported by the USSR Ministry of Trade and its local organs. Cooperatives need help via credit, the development of exchange of waste products, cost accounting wholesale markets, supply bases and subsidiary enterprises. Cooperative family-contractual enterprises have more than a utilitarian, anti-shortage significance. Without cooperative and collective enterprises we cannot imagine the development of an integrated domestic market. The support of this process, having an economic and socio-political component, requires an understanding of that profound principle that V. I. Lenin in his article, "On Cooperation," called the "enormous significance of cooperation."⁴ He insisted on the preferential financial support of cooperatives, the narrowing of cooperation of state capital in the interest of this kind of cooperative turnover "in which actual masses of the population actually participate." This principle corresponds fully to our party's course toward democratization of all aspects of the life of our society.

The implementation of in-depth reform of the economic mechanism and the democratization of life in society establishes principally-new requirements for the USSR Ministry of Trade and its republic and local organs. They must become the conductors of the process of developing the new market and of eliminating the shortage. But this regulation is possible only if it is built upon predominantly economic methods.

We have not yet been able to fully realize the fact that the process of development of an integrated market in our country, a new process which is progressive very inconsistently, is gaining strength. Speaking in the words of V. I. Lenin (in the report "On the New Economic Policy" at the 7th Moscow Regional Party Conference on 29 October 1921), the question of what effect economics will have on the market and on trade has not yet been posed seriously. (And today these words sound very topical).

Footnotes

1. It is essential to consider preference in correlations of the population's expenditures to the advantage of services that require payment. In 1987 it was not possible to eliminate the obvious misalignment in expenditures for the purchase of goods; in 1988 it is planned to achieve a more rapid pace in the growth of the implementation of services that require payment. Their volume should reach 63.1 billion rubles with a growth of 11.9 percent. Their proportion in the market expenditures of the population will increase to 14.8 percent.

2. The sale of timber materials to the population in 9 months of 1987 alone as compared with the same period in 1986 increased by 37 percent.

3. The restructuring of management of trade and the processes of concentration in wholesale trade in republics and oblasts and the development of wholesale-retail associations bring forth the question of developing cost-accounting territorial centers for the study of supply and demand. (Such projects have been prepared for the Latvian SSR and Chelyabinsk, Tyumen and Rostov oblasts).

4. Lenin, V. I. "On Cooperation." Poln. sobr. soch. [Complete Works], Vol 45, pp 369-377.

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GOODS PRODUCTION, DISTRIBUTION

ESSR Deputy Trade Minister Notes Ways to Improve Services

18270053a Moscow SOVETSKAYA TORGOVLYA in Russian No 4, Apr 88 pp 6-8

[Article by R. Padar, ESSR deputy trade minister, Tallinn, under rubric "Steps of Restructuring": "What Is Impeding the Restructuring? (From the Experience of Economic Ties)"]

[Text] Under the new management conditions, the activity of trade enterprises is based on complete cost accountability. And that means that every enterprise must count primarily on its own "earnings," and the higher they are, the broader the opportunities for improving the social and production conditions for developing the labor collective. The task is complicated by the fact that at the present time two extremely responsible functions have been assigned to trade: the guaranteeing of the complete balancing of the retail commodity turnover; and the representation and defense of the interests of the consumers.

The effective resolution of this dual task is objectively linked primarily with improving the resource support of retail commodity turnover, and this, in its turn, presupposes the further improvement and reinforcement of the economic ties between trade and production, as well as the optimal combination of the interests of territorial and branch planning, as was stipulated in the Basic Principles Governing the Fundamental Restructuring of the Administration of the Economy, which were approved by the June 1987 Plenum of the CPSU Central Committee.

The new procedure of planning and administration of the production of consumer goods and of trade, which procedure will have to be assimilated by the enterprises

in our branch, is a major step forward in this area. Nevertheless there are justifications for asserting that a mechanism of formation of commodity resources that would completely correspond to the tasks and interests of trade and the consumer and would promote the overcoming of the *diktat* of the producer has not yet been successfully created. We can judge this on the basis of practical experience, since Estonian SSR was among the first republics to begin assimilating the new planning procedure — starting on 1 January 1987.

Wherein lies the reason? Because it would seem that the trade organizations have received today rather reliable instruments for exerting an influence upon their partners in industry. In the 17 July 1986 decree issued by CPSU Central Committee and USSR Council of Ministers, concerning the improvement of the economic management in trade, it is stated that the basis for developing the plan for producing commodities is exclusively the production order for trade, and the commodities for which that production order is lacking, or for which no contracts have been concluded at wholesale fairs, cannot be included in the output plan. According to the new statute, approved by USSR Mintorg [Ministry of Trade] and USSR Minlegprom [Ministry of Light Industry], the production orders are prepared in an extended assortment, and it is subdivided into commodities for children, young people, and older persons, with a consideration of the price factor. Unlike the situation in previous years, the "raw materials to finished output" chain has been prolonged: no later than a month before the wholesale fairs for the sale of commodities, fairs are held for the wholesale selling of basic types of raw and other materials, as well as fittings and components. There has been a sharp intensification of the economic sanctions for the improper fulfillment of the contract pledges.

Thus, the improvement of the interrelationships between trade and production must proceed along the following two directions:

— the consistent increase in the responsibility borne by the production associations for working out the plans for the production of commodities, their assortment, and quality in conformity with the production orders for trade;

— the intensification of the effect exerted by the trade organizations upon the enterprises in industry that produces consumer goods.

But how are things proceeding in real life? The results of a survey conducted by specialists in the trade and industry of Estonian SSR indicate that, in practice, the relations between trade and industry have been practically unchanged. And the crux of the matter by no means is that the new procedure has failed to take something into consideration. Rather, it is in the real-life situation at the market, a situation that puts makes its own corrections into even the plans that are the best-substantiated ones.

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It is no secret that there continues to this day to be a shortage of many consumer goods, which shortage is the result of the fact that the production capabilities have been lagging behind the constantly growing market needs. This puts industry in more favorable conditions as compared with trade, which, in the role of suppliant, depends upon the supplier. This is also promoted by the very mechanism of formation of commodity resources under the conditions of their insufficiency, when the commodities are allocated by superior agencies, and the trade organization to which the commodity allocations have been given can purchase them only within the allocation limits and only from the supplier to whom it has been assigned. If one considers that, when distributing the allocations, provision is made not only for the volume, but also the group assortment of purchase of the commodities, it becomes obvious that the influence of trade upon the supplier is, if one can express it this way, only theoretical.

True, trade can express its requirements during the period before the fair when coordinating the production order in extended assortment, as is stipulated by the normative documents. However, in practice, the assortment is defined only by the supplier's capabilities and is formed by him in a unilateral procedure. Therefore the industrial associations are able to force on the market their own assortment policy, which frequently is extremely remote from the consumers' requirements.

In the final analysis the system for guaranteed sales also has a negative influence upon industry. When the sales of commodities are stable and easy, industry does not feel any several effect on the part of the consumer that would force it to change the assortment or improve the quality of the commodities. And that means that it is also possible to take a less responsible attitude toward the operations that precede the sale of the output — at the stages of modeling, designing, finishing, packaging, etc. It would scarcely seem necessary to talk specifically about the way in which all of this has an effect upon the quality of the output.

Discussions with specialists in trade and industry, and visits to wholesale fairs, have indicated that the coordination of the production orders during the period before the fairs is more administrative than commercial in nature. The contracts frequently simply reflect what was put into the production programs by the industrial associations and their superior agencies.

All this leads to the conclusion concerning the need for the fundamental restructuring of the contractual relations between trade and production, in order to guarantee, in the real-life situation, the priority of the consumers' interests. Recommendations pertaining to this question have already been stated in the press. Without going into a detailed analysis of those recommendations, we might note only that not all of them will yield the desired effect if no steps are taken to accelerate the saturation of the market with consumer goods. Only a

saturated market creates the real prerequisites for eliminating the producer's *diktat* over the consumer, for making the changeover from the allocated sale to the free wholesale selling of commodities and the implementation of the principles of socialist competitiveness, and, as a consequence, for considerably improving the assortment and quality of the consumer commodities.

However, it would be incorrect to feel that the market can be saturated only as a result of the taking of all steps to increase the production of commodities. There is yet another path that makes it possible to use more efficiently for these purposes the region's internal resources. We have in mind the putting of the formation of the commodity support of the retail commodity turnover in the union republics on a fundamentally new basis, that relies on their interests and thus promotes their self-interestedness in constantly increasing the production of consumer goods.

For example, in Estonian SSR an economic experiment in light industry is being carried out successfully. There has been a considerable acceleration of the growth rates for the production of the basic articles in that branch; an increase in labor productivity; and an increase in the profit received by the production associations. But it must be said that, practically speaking, the republic's population has not yet felt any results from these positive changes. This is explained by the fact that there is no direct dependency between the increase in production and the increase in the market resources of commodities produced by light industry in the republic. Standing as an insurmountable barrier between them are the allocations for commodities that are allocated to the republic by USSR Ministry of Trade. As a union-level agency, it is self-interested in supporting the branch as a whole, and for USSR Ministry of Trade the republic's interests are of secondary importance. And this leads to a situation in which, when allocations are being given to various regions of the country, the principle that frequently prevails is the comparative principle of distributing on a per-capita basis, which principle evokes a striving to pull those that are lagging behind with regard to this indicator up to the level of the advanced ones. As a consequence, in a number of instances those republics that produce more prove to be, strange as it sounds, in a worse condition. In such conditions the regions that ship out commodities produced by light industry lose their self-interestedness in the accelerated increase in production of them. In other words, the distribution system that developed under conditions of the stagnant development of the economy is a kind of inhibitor in resolving the task of saturating the market with commodities.

Obviously, the time has come to pose with all definiteness the question of rejecting that system, which, essentially speaking, is a graphic example of the violation of the principle of social justice.

In our opinion, which has been verified by means of computations, it is necessary to change over to stable long-term (for example, for five years) scientifically

substantiated norm lists for interrepublic shipments of commodities produced by light industry. Every region (every republic) must have prior knowledge of its obligations to ship output, and must be informed about how many commodities, and what kind of commodities, it must receive from other republics, as well as from import. Everything else depends upon the republic's light industry, and upon the extent to which it is ready to fulfill the production orders for the trade organizations in its region. If things are going poorly in light industry, then the culprit is known; if they are going well, there is someone to thank. One observes the activation of a powerful mechanism — the economic interests of the region as a whole. Another factor of no small importance is the morale aspect of the question: because in this instance one sees the elimination of the dependence that the regional market has upon what allocations can be successfully "beaten out" of USSR Mintorg by the republic's trade organizations.

There will be a considerable increase in the region's self-interestedness in building up production. With the proposed system, the market resources will be formed with a consideration of the production of commodities and the balance of shipping in and shipping out on the basis of shipments among the republics, which do not change over the period of the five-year plan. Under these conditions there will arise objectively an interest in the accelerated development of light industry, its technological re-equipping, and the creation of small enterprises with a flexible structure, of citizens' production cooperatives, etc., for purposes of the rapid saturation of the local market. As a consequence, the retail commodity turnover will grow at accelerated rates and the public's demand will be satisfied more completely.

The question might arise: what about the output produced by associations and enterprises in excess of the concluded contracts? Here it must be kept in mind that output in excess of plan is, for the region, an additional source of resources, the use of which is regulated by the territorial agencies. It seems to us that in this instance there must be an intensification of the role played by trade, and primarily wholesale trade. A way out can be seen in organizing the sale of those commodities on commission principles, through wholesale enterprises, which will act as intermediaries, regulating the sale of the output produced in excess of plan, including those in the sphere of barter transactions.

As for the production associations (enterprises) in light industry, their plans for the production of commodities must be based on contracts concluded at the republic-level wholesale fair, and on delivery assignments for shipments among the republics. At such time it would be desirable for the shipment assignment to be viewed as a state production order, which will increase the responsibility for fulfilling the assignments for shipments among the republics. The production associations must be informed about the volume and structure of that state production order prior to the holding of republic-level

wholesale fairs and the conclusion of contracts with the local trade organizations. All the remaining production capacities should be channeled into the fulfillment of the assignments from the trade organizations in the regions.

The proposed restructuring of the system for forming commodity resources in the region will promote the accelerated saturation of the market with commodities. Wherever effective steps are taken to develop light industry, the supply and demand for these commodities can be balanced over the period of a few years. Moreover — and it is necessary to emphasize this specifically — the saturation of the market in individual republics earlier than in others will in no way contradict the nationwide interests. Our computations indicate that, with this approach, the final goal — the overall balancing of the country's domestic market — is achieved much more rapidly than when steps are taken everything to raise to an equal amount the degree of its saturation simultaneously, which is something that, practically speaking, is unfeasible.

These are the kinds of changes that the regions that ship out consumer goods are primarily self-interested.

The second series of suggestions is aimed at increasing the responsibility borne by the production associations in light industry for the worsening of the quality and assortment of the commodities being produced during the "transitional" period, when the market has not yet been saturated with commodities. The introduction of these recommendations falls within the competency of the republic-level agencies. They are linked with the development of certain normative documents, the re-examination of the criteria for evaluating the work of the production associations in the area of the quality and assortment of the articles, and the change in the procedure of holding the republic-level wholesale fairs.

An analysis of the work of the wholesale fairs indicates that not all the associations and enterprises in light industry are working to improve the assortment and quality of the output with identical intensity. In a market where there are shortages, this situation, however, exerts practically no influence upon their market success and does not reflect on the financial results of the enterprises, and in the final analysis this reduces initiative. Therefore, until the economic levers begin to operation, it is necessary to find other incentive methods. One of the possible versions is the competitive placement of production orders on the basis of a comparative evaluation of the collections of samples submitted by the production associations. It is definitely necessary to exclude any samples that do not correspond to the requirements of tomorrow's fashion, and to do everything necessary to encourage the creators of progressive models.

Something else that requires improvement is the very organization of the republic-level wholesale fairs dealing with commodities produced by light industry. As has been indicated by practical life, during the three or four

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days when the republic-level wholesale fairs are in operation, the specialists from the trade organizations frequently find themselves forced to make hastily the important decisions dealing with the formation of commodity resources.

The situation will improve if the concluding of contracts with specifications for the shipment of commodities is deconcentrated to the entire year. For this purpose the republic-level wholesale fairs for the buying and selling of commodities produced by light industry should be held in two stages.

At the first stage, which can be held in the traditional form, the parties conclude contracts with specifications for the entire year, but only for a group assortment, that is, within the products list stated in the production order. At the second stage one carries out the coordination of the detailed assortment, that is, the models, items, colors of the articles, etc. This coordination can be done two or three times a year as industry prepares to produce the new models. These coordinations are organized by the production associations.

Another version is also possible, which differs from the existing one to a lesser degree. At the first stage of the fair, the parties conclude contracts and specifications for the buying and selling of commodities in the group assortment on the basis of the products list in the production order for the entire year being planned, and also coordinate the assortment of specific models for the first half-year. At the second stage they coordinate the assortment of specific models for the second half of the year being planned. It seems to us that, in the long run, as the reciprocal trust between trade and industry increases, at the republic-level fairs one should gradually change over to more general understandings relative to the commodity makeup of the contract. For example, in addition to the overall volume of buying and selling for the group of commodities, one should define only the quantity (number) of models in the group or the maximum quantity of articles in a single model. Then the

trade system will receive greater freedom of maneuvering, replacing the assortment with a consideration of the variations in the public's demand over the course of the year.

The wholesale fairs held in 1987 showed that the innovation consisting of the replacement of the trade system's production orders by the needs for commodity resources proved to be beneficial only for industry, whereas the trade system had large losses as a result of this. With this procedure, industry proved, essentially speaking, to have its hands tied. This confirms once again that the production order is still the most important orientation marker for industry when determining the volumes of production of output at the enterprises, and the production order prepared within the confines of allocations cannot replace it.

The broad-scale restructuring of the entire economy and the Law Governing the Enterprise require the taking of a new approach to the problem of forming commodity resources. At the present time it is necessary to maintain a course at the more complete consideration of the requirements of the market and the consumer, including those when holding wholesale fairs. In our opinion, this is precisely what will promote the effective resolution of the task of saturating the market with the commodities needed by the public, and the overcoming of the separation that exists between industry and the consumer and his demands. Of course, this will complicate the life of the production associations, but, on the other hand, the consumer will gain. Real monitoring of the producer by the consumer will go into effect. If it seems to anyone in industry that the power of the market is excessively dangerous, one can remind him of one of the rules for the behavior of the suppliers at the market, a rule that has been tested by marketing practice: small enterprises should adapt to the requirements of the market; medium-sized ones should strive to regulate it; and large ones should form the market. And without this it is impossible to work effectively.

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LABOR

Expansion of Consumer Cooperatives Seen

Deputy Minister Interviewed

18280057a Moscow EKONOMICHESKAYA GAZETA
in Russian No 14, Apr 88 p 9

[Interview with Viktor Nikolayevich Semenov, USSR deputy minister of finances by correspondent M. Panova: "Cooperation — Equal Sector of the Socialist Economy"]

[Text] The draft law of the USSR entitled "Cooperation in the USSR," which has been published for national discussion, is opening up new opportunities for developing the cooperative movement throughout the country and is expected to ensure equal interaction by the state and kolkhoz-cooperative sectors in the socialist economy. Our correspondent M. Panova held a discussion with USSR deputy minister of finances Viktor Nikolayevich Semenov concerning the importance of the draft, as set forth in its new statutes, in connection with improving the economic mechanism within the system of cooperation.

[Question] Similar to the USSR law governing a state enterprise, this draft law is aimed not so much at strengthening the forms of cooperative activity already in existence, but rather it is directed towards creating a reliable framework of economic, legal and organizational conditions for future construction in this area. Such an approach is fully understandable, since a radical economic reform is presently being carried out and various aspects of economic life are undergoing intensive changes. ON what basis was the draft developed?

[Answer] The USSR Draft Law on Cooperation derives from the reactivation of Lenin's teaching on cooperation under socialism and the tasks embodied in the radical reform. In developing the law, a great amount of valuable material and recommendations were supplied by the ministries, departments and scientific institutes. Articles which reflected the experience and problems concerned with the development of new collectives and the kolkhoz economy were summarized in the periodic press.

And finally, mention must necessarily be made of the rich historical tradition associated with the cooperative movement in our country and other countries. For example, cooperation in agriculture in pre-revolutionary Russia encompassed 12 million peasant farms. True, this was mainly credit cooperation. Of 1.2 billion rubles worth of capital in agricultural cooperation, it accounted for 990 million.

Interesting experience was accumulated by agricultural cooperatives during the soviet period, in the 1920's. Their forms were extremely diverse and their development led to the formation of a different type of associations — territorial and branch — for satisfying the production and consumer requirements of cooperatives. And the possibility of organizing associations, cooperative unions, cooperative banks and cooperative insurance institutes was stipulated in the draft law. Cooperatives could be organized for the hiring of tractors and complicated agricultural machines, motor vehicles and other items of technical equipment, agro-chemical and other services, the joint management of private plots and supply-marketing, credit and other services. All of this is making it possible to utilize more completely the opportunities afforded by the cooperative form of management.

[Question] The negative experience of the past has been taken into account. Indeed, under the conditions imposed mainly by the administrative-volitional methods for economic management in our country, cooperatives for the most part have lost the features of cooperative enterprises as conditioned by the group form of ownership. It is now being said that they have drawn closer to the state and this is adversely influencing the effectiveness of cooperation. Thus a considerable portion of the draft law is devoted to legislative guarantees for the development of the cooperative movement. What is your opinion regarding these guarantees?

[Answer] These guarantees are many-sided in nature. For example, a free selection of the forms of economic activity is guaranteed. The creation of cooperatives that is not conditioned by any special authorization by soviet, economic or other organs is also guaranteed. It is merely necessary to register the regulations adopted during a general meeting of citizens desiring to create a cooperative, in the executive committee of the soviet of people's deputies. The consent of the appropriate organs is needed only in those instances where a tract of land or other natural resources are required. But this is the overall routine. Certainly, cooperatives cannot be created for forbidden types of activity, for example the production of narcotics, alcoholic beverages or weapons.

Independence is guaranteed in handing down decisions concerned with all aspects of cooperative life, with discussions of operational trends, the production volume and structure, development of the plan, production organization, internal order, the sale of products and profit distribution. Interference by state or other higher cooperative organs in the economic or other activities of a cooperative is not tolerated.

Mention should be made of the consistent restoration of cooperative principles in kolkhoz operations. Allow me to cite one such important aspect. There is special authorization which allows kolkhozes, on a voluntary basis, under mutually advantageous conditions and based upon a decision handed down by a general council,

to be included in the structure of rayon and other agro-industrial associations. But in cases involving infringement of their rights and legal interests and inefficient joint activity, they can, based upon a decision handed down during a general meeting, withdraw from an association.

Finally, a considerable number of articles in the draft law provide the members of a cooperative with guarantees: social fairness and social equality in their right to work, personal profit, the appropriate amount and quality of labor and social security.

[Question] In guaranteeing the independence of collective management, the draft law develops many aspects of the economic responsibility of cooperatives. Is this not so?

[answer] Basic importance is attached to the question of profitable work. A cooperative, as noted in the draft, is by its socio-economic nature a self-supporting enterprise. Unprofitable work is incompatible with its essence. Many kolkhozes which actually manage on the basis of irretrievable bank credit are still unprofitable. There are many unprofitable organizations within the system of consumer cooperation that exist on the basis of centralized funds. The consistent implementation of the principles of self-financing is incompatible with such a situation and indicates that a change is needed in the system.

The property responsibility of cooperatives in terms of their obligations has been raised substantially. A cooperative bears responsibility for all of the property belonging to it, including fixed capital. Earlier this responsibility was limited only to monetary funds. If a cooperative operated on an unprofitable basis or was unable to make payments, the bank was authorized to raise the question of its liquidation before the executive committee of the local soviet of people's deputies.

Or let us take responsibility for the quality of output. We are still encountering frequent complaints regarding the products being produced by cooperatives in the form of consumer goods. Moreover, after uncovering a defect in a product, a consumer does not know to whom he should address his complaint regarding the low quality.

Today a cooperative is obligated to ensure the strict observance of those state standards and other norms and requirements which guarantee safety and protection of the health of people and the environment. The goods sold by cooperatives in the sphere of production must have a production stamp or trademark.

Control over the quality of cooperative products is entrusted to state organs and yet this control, which is a very important condition and one which protects the interests of consumers and also those of the state, still remains to be organized.

[Question] If cooperatives in the sphere of production, services and trade are to occupy a worthy place in our economy, they must display concern for the development of production and for the use of modern machines, equipment and technical innovations. In short, cooperatives must accumulate, expand and bring about technical improvements in production. Unfortunately, the actions of many cooperatives in the production of consumer goods and services have shown that they are oriented only towards the rapid earning of personal income. This explains the desire to raise prices and to neglect the problem of quality. This is arousing dissatisfaction among the population and a bias against cooperative operations. How are these problems being resolved within the system of cooperation by the economic mechanism proposed in the draft?

[Answer] Understandably, these problems are now being solved only by means of economic methods and not on the basis of directions and instructions. Here a decisive role is played by the taxation mechanism proposed in the draft. What is important here?

Considerable importance is being attached to the fact that a different approach is needed for taxing the income of a cooperative on the whole and also the personal income of those participating in cooperation. Thus the income of a cooperative or its profit are taxed on the basis of stable rates established for a period of 5 years. The personal income of members of a cooperative and persons who work in a cooperative based upon a labor agreement is taxed in accordance with a progressive scale. That is, the amount of income tax paid increases with growth in income.

Stable income tax rates for a cooperative serve to create interest in expanding production. And progressive taxation of personal income economically stimulates a proper ratio between the means for production and social development on the one hand and wages on the other. As you can see, we have in mind here a sound ratio for the fund for savings and consumption at the level for each specific cooperative. This problem noticeably touches upon the personal interests of a cooperative's workers and is of considerable national economic importance. This then is how the tax levers function and only the future will reveal their effectiveness.

The economic competition in products and services as proposed by state enterprises and cooperatives is having an effect. A saturation of the market brings about a reduction in prices and improvements in the quality of the products in the interest of finding customers. And this requires the development of production and reduced expenditures through improvements in production.

[Question] A completely new phenomenon for our economic practice, such as the issuing of stock for the purpose of mobilizing financial resources, must serve as a means for solving these tasks of cooperatives. Is this not so?

[Answer] Yes, the issuing of stock by cooperatives and their associations will create a new economic situation and encourage new economic relationships. However, the issuing of stock will not transform a cooperative into a joint-stock company, as is sometimes thought. In essence, the shares and their share relationships are restored. Indeed, individuals who acquire the stock of joint-stock companies do not work in them. And it is stated in the draft that stock is issued for sale to the members of a cooperative and to persons who work in them in accordance with a labor agreement. They can also be procured by other enterprises and organizations.

Further, a stockholder can participate in solving the vital problems of a joint-stock company by voting based upon the number of shares held by him. The members of a cooperative solve all problems acting together, while persons who work on the basis of a labor agreement possess a deliberative vote. Moreover, as members of a labor collective, they also can participate in solving the problems of the collective's life and activities.

The special purpose of funds obtained from the sale of stock is set forth in a very strict manner. They form an additional source for financing the expansion, modernization and technical re-equipping of production and for converting over to the production of new products, operations and services for which there is a high demand.

Fears have been expressed that this will create a market for capital, with its inherent speculation with regard to a change in the market exchange rate for stock. However, the possibilities of this happening are diminishing. It follows from the draft law that all stock operations will be carried out at their nominal value, that is, in accordance with the announced price for it. As a rule, the overall value of the stock must not exceed the amount of

the annual gross income. This limits the scale for stock savings and guarantees the interests of the investors and the realization of the funds invested in stock.

[Question] In the editorial board's mail, readers have at times expressed the opinion that the removal of restrictions in attracting labor resources into cooperatives will bring about a large transfer of personnel from the state into the cooperative sector. Is this true?

[Answer] It does not believe that there is any basis for this fear. One must take into account the opportunities available for developing the logistical base and raw material sources. Despite the at times strong opinion regarding the extreme ease of cooperative earnings, life tends to reveal just the opposite picture. Work in cooperatives is extremely tense, intensive and more productive than in similar subunits of state enterprises. Cooperatives respond rapidly to changes in style and in consumer requirements.

All of these factors, in connection with the development of an economic competition, forces the workers attached to state enterprises to improve their status with regard to the intensity of their work and their efficiency. Such a competition also has a positive effect with regard to improving the economic mechanism.

It appears that the economic competition will stimulate a conversion over to the second model of complete cost accounting, in which the earnings of state enterprise workers will be more closely aligned with the income of the enterprise and the final operational results and the use of a collective contract in intra-enterprise relationships.

Cooperative Growth

18280057a Moscow *EKONOMICHESKAYA GAZETA*
in Russian No 12, Mar 88 p 12; No 14, Apr 88 p 16

[Tables by USSR Goskomstat]

Number of Cooperatives on 1 January 1988

	Total number of cooperatives	In domestic services	In public catering	In the sphere of consumer goods production	Cooperatives for the production of confectionery and baked goods	For the procurement and processing of secondary raw materials	In other types of work (construction, transport, trade and others)
USSR	13921	5323	3007	2888	370	939	1394
RSFSR	7326	2723	1627	1428	157	442	949
Ukrainian SSR	1843	848	311	385	14	167	118
Belorussian SSR	787	366	97	115	-	61	148
Uzbek SSR	550	212	177	89	49	21	2
Kazakh SSR	452	181	131	48	-	77	15
Georgian SSR	594	135	120	247	49	22	21
Azerbaijan SSR	320	91	93	39	43	13	41
Lithuanian SSR	503	187	79	180	16	30	11
Moldavian SSR	286	109	56	56	21	10	34
Latvian SSR	246	90	50	57	1	17	31

Number of Cooperatives on 1 January 1988

	Total number of cooperatives	In domestic services	In public catering	In the sphere of consumer goods production	Cooperatives for the production of confectionery and baked goods	For the procurement and processing of secondary raw materials	In other types of work (construction, transport, trade and others)
Kirghiz SSR	199	52	74	53	2	17	1
Tajikik SSR	177	63	66	25	-	11	12
Armenian SSR	263	59	46	120	15	15	8
Turkmen SSR	119	39	41	24	3	10	2
Estonian SSR	256	168	39	22	-	26	1

Principal Indicators of Work of Collectives in the Procurement and Processing of Secondary Raw Materials on 1 January 1988

	Number of registered cooperatives	Number of cooperatives engaged in production of goods	Number of workers, personnel(1) engaged in production of goods	Volume of goods sold during year, in thousands of rubles, for cooperatives engaged in production of goods
USSR	1331	939	12876	45072
RSFSR	601	442	6486	26175
Ukrainian SSR	302	167	2450	6391
Belorussian SSR	87	61	805	2530
Uzbek SSR	31	21	268	220
Kazakh SSR	95	77	703	1084
Georgian SSR	27	22	183	582
Azerbaijan SSR	17	13	243	1292
Lithuanian SSR	37	30	266	702
Moldavian SSR	12	10	85	82
Latvian SSR	21	17	230	875
Kirghiz SSR	21	17	277	542
Tadjik SSR	20	11	199	266
Armenian SSR	17	15	418	2390
Turkmen SSR	15	10	112	311
Estonian SSR	28	26	151	1630 (1)Number of members of registered cooperatives

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Greater Flexibility for Cooperatives Urged

Shortcomings of Draft Law On Cooperation
18280061a Moscow *IZVESTIYA* in Russian 4 May 88
p 2

[Article by A. Zhuravlev, Doctor of Economic Sciences, Minsk: "Potential for Deceleration Retained"]

[Text] A typical example: the newspaper SOVETSKAYA BELORUSSIYA, commencing in July of last year, published information on three occasions concerning the difficulties being experienced by the Minsk Effekt Cooperative. Only after this had been done was it able to

commence its work and yet today it is still experiencing these difficulties. Initially a bank account was not opened up for it owing to the fact that the cooperative was oriented towards providing business-like services for organizations. Within Mingorispolkom [Minsk Municipal Executive Committee], it was required to perform domestic services for the population. The chief of administration for the comprehensive economic and social development of cooperatives of Mingorispolkom, who works in behalf of the needs of production, simply did not cooperate and was confident that he was acting properly.

In accordance with the draft law entitled "Cooperation in the USSR," cooperatives are authorized to participate in any socially useful work. But it is premature to draw

the conclusion that opponents of the Effekt and other, in their opinion, doubtful cooperatives serve as weapons. For 8 months now the Minsk Sekunda Cooperative has been attempting to register its activities. Its name derives from one type of service it provides — the repair of electronic watches. But the cooperative is prepared for more complicated work requiring unique program support. But the municipal authorities feel that there is no need for the cooperative specialists to move any further in the direction of carrying out small repairs on domestic equipment. Good people were selected: approximately two dozen specialists, almost all of whom possess higher educations. They asked society to make efficient use of their talents and yet the leaders of Mingorispolkom stubbornly turned its back on them.

The chairman of the Sekunda Collective, S. Martynov, walks back and forth among several offices. The question concerning the cooperative has been examined in the BSSR Council of Ministers, in Mingorispolkom and in the party's municipal committee. However, the party's position with respect to such cooperatives is indeed clearly defined in the draft law. Are the local powers of deceleration really this strong?

Following prolonged deliberations, Matynov has shared his considerations regarding the draft law "Cooperation in the USSR." He maintains that some of his articles suffer from the fact that they are too declarative. The absence of a system for appealing the actions of responsible officials, one which would define their responsibility and the schedules for compensating for the damage inflicted. The potential for arbitrariness is continuing. For example, Point 3 of Article 29 stipulates that "in incidents involving unreliable reporting on the production and income of a cooperative or careless accounting, the bank is authorized to terminate the issuing of credit and cash-accounting services for the cooperative." This is a gift for bureaucrats, since mistakes can always be found in documents and fault found with them. And following this where can one seek justice for the bank's arbitrariness? A bribe should not be offered.

I would like to mention once again those difficulties which were not eliminated by the draft law. The problems concerned with price formation are of a more painful nature in economic practice. Certainly, the monopolist-cooperation specialists are inflating the prices. For example, the price recently asked for a knitted cap in Minsk was 15 rubles and this was at a time when the expenditures for producing it did not exceed 2 rubles. But to combat growth in prices with the aid of administrative prohibitions — this requires the suppression of cooperative and individual labor activities. Indeed, there are economic means: saturating the market with an inevitable reduction in prices and the introduction of a progressive tax on income.

But it is stated in the draft law: "A cooperative must not tolerate an economically unsound increase in prices." Let us imagine what the consequences of such an entry

could be. Up until now, only those prices which have been coordinated and approved are considered as economically sound. But the fact of the matter is that prices, similar to other economic norms, cannot be stabilized or strengthened by administrative actions. It is my opinion that this circumstance is not thoroughly understood. The opinion is rather widespread that there will be a price reform and that the prices arrived at following discussion will prevail. However, life does not accept such "orders." And thus Article 17 of the draft law entitled "Cooperation in the USSR" can in my opinion be reduced to one single and simple statute that is understood by all: "Cooperatives sell the products they produce and their services at commercial (market) prices. This is the law of value. Let us listen to its voice.

In my opinion, only tax policy must come down to us from on high, with successful economic activity being dependent upon the flexibility of this policy. Tax policy is a type of "tuning" of the system for administering the economy based upon a "wave" of economic laws. The economy responds to tax policy in like manner as a ship reacts to its rudder being turned.

Logistical support represents a special difficulty for cooperative specialists. Today they are searching for opportunities and channels for obtaining deficit materials, component elements and spare parts.

A curious incident occurred in the Minsk Gorizont Association. The enterprise agreed to fulfill an order of a cooperative, but using materials furnished by the client, since the material was funded. When the order was ready, it turned out that the cooperative obtained the material from the association's storehouse. And we are encountering many such forced violations caused by all types of far-fetched "rules" and "systems" in the logistical supply for cooperatives. In the final analysis, there is a "loop-hole" for every prohibition imposed.

Cost accounting is unthinkable in the absence of wholesale trade in the means of production. And in the future there must be no other type of logistical support with the exception of that organized through trade (not only wholesale, but also retail trade when required). If during the period given to the establishment of cooperatives, it becomes necessary to establish a more favorable regime, then tactical economic decisions can be adopted at the appropriate levels of administration. A law is a strategic decision.

Draft Law on Cooperation in USSR
18280061a Moscow *IZVESTIYA* in Russian 5 May 88
p 2

[Article by I. Buzdalov, Doctor of Economic Sciences: "Reviving the Sense of Ownership"]

[Text] I have not assigned myself the goal of focusing attention on the shortcomings of the plan. There are many of them. There are contradictions, carelessness,

excessive brevity and long-windedness in the formulations or, in other words, vagueness. And this is especially undesirable in such a serious document. Indeed, its importance goes far beyond the framework of cooperation. It is directed towards overall approval of the ideals and values of socialism. This is truly an innovative document in terms of the entire complex of measures concerned with restructuring, as proclaimed and partially carried out throughout the country over the past 3 years.

In the Law Governing a State Enterprise (association), there is a statute regarding its status as a producer of goods, with the capability to develop and approve plans independently and to operate on a self-financing and complete cost accounting and even self-administration basis. But the issuing of state orders from above, the responsibility of including them in a plan and the very size of a state order are such that independence and equal contractual relationships with the clients remain formal just as in the past. Meanwhile, it is known that independence is a chief consideration if we are seriously discussing radical economic reform or the development of genuine democratization in production. If certain refinements are still carried out, then essentially there are no basic contradictions between a state order and an informal agreement in the draft law governing cooperation. A cooperative is authorized to accept orders voluntarily and to reach agreement with a client. Here we have economics, commodity-monetary relationships and the market clearly expressed. Not only the cooperative, but the enterprise and even the client must become an experienced "shopkeeper." Basic changes are taking place in the administrative methods.

However, the danger of converting a state order into a state command, judging by the text of the draft law, is still continuing. First of all, there is no clear statute concerning limitations being placed upon the functions of party, state or direct economic direction of cooperatives. And it has clearly been known over an extended period of time that the mixing of functions is the chief source of bureaucratism and irresponsibility. In the final analysis, as emphasized in a resolution handed down during the 11th Party Congress (1922), the mixing of functions can bring about completely ruinous results in the economic sphere.

A most timely slogan of the present day — "not dare to command." And the sphere of state management of the work of cooperatives and control over such work must be outlined more clearly and definitely in order to eliminate completely the practice of deliberate prohibitions.

When on the one hand we read in the draft that a state order is a voluntary matter and is carried out on the basis of an economic agreement and, on the other, mention is made of the delivery of a state order to a kolkhoz (Article 31), then only little remains of the basic principle of all work carried out by cooperatives — independent management. We are presently observing the sad result in

sovkhоз practice of just the one word "delivery," a word which does not improve their status as producers of goods. But the function of the latter — to formulate an order — which enjoys equal status with the client, could change everything.

At the present time, the workers attached to national economic state departments and organs, including Gosplan, view the cooperative movement as something which is developing apart from these departments. And indeed a cooperative is not just merely an enterprise or organization. According to Lenin, cooperation is a form of connecting links. And these connecting links and mutual relationships develop on the basis of economic principles. The main ones are: economic isolation of a labor collective, equality of partnership, equivalent commodity-monetary exchange and agreements involving mutual interest and responsibility. In this regard, the draft law is proclaimed to be a basically important theoretical and practical statute: equality of a labor collective of the cooperative and state sectors of the socialist economy.

And equal rights assume equal responsibilities. And first of all — the ability to base relationships on a commodity-monetary exchange. In the absence of such ability, it is impossible to realize effective development for cooperation or for the cost accounting and economic relationships between its enterprises and organizations with the state sector. Only when enterprises in the cooperative sector begin to compete with enterprises in the state sector will we achieve effective functioning based upon the democratic principles of the economic system of socialism. This then is the condition for logically completing the radical reform of the economy.

However, it is here that a serious psychological barrier in economic thinking must be overcome: let us return to Lenin's ideas regarding NEP [New Economic Policy; 1921-1936]. Here we have in mind not only a tax in kind, which established the basis for normal trade turnover and for the development of the socialist market. The task discussed on the eve of the 70th anniversary of October is far more extensive: to extract everything that is valuable and needed from the new economic policy. And these values include — personal material interest and economic responsibility from top to bottom, true cost accounting and self-financing. Indeed the digression to NEP was a digression to socialism and not to the contrary as many were wont to believe. V.I. Lenin pointed out that participation in cooperation and in cooperative turnover for the entire population could be achieved only "through NEP." This task logically expanded to the broader and more general task of socialist management: to make a NEP advocate a supporter of cost accounting relationships — not only a private producer but a cooperative and state enterprise.

In this regard, a need has arisen for having a section in the law concerning inter-enterprise cooperatives and their alliances. They are mentioned only in connection

with the APK [agro-industrial complex]. It is precisely these cooperative links between structural elements of the national economy, which are entering into more extensive relationships with foreign partners, that are revealing a high degree of effectiveness. These links serve as a guarantee of success in carrying out the radical economic reform.

The draft is oriented towards stimulating the development of "economic" competition and "market competition," both among cooperatives and between cooperatives and state enterprises. The principles of socialist cooperation in the specific forms in which they are to be carried out as proposed are opening up an expanse for economic managerial methods. They are removing the profit motive from competition and they are stimulating in such competition a healthy beginning, one which is stimulating social progress. Indeed, here we have in mind the radical principles of socialism: distribution in accordance with the results of labor, social fairness, democratization of all economic life and approval of the conditions for the creative manifestation and social recognition of the talents of people.

Socialism is influenced by an extremely important aspect of the draft law: equally interacting cooperative and state enterprises constitute a "principal aspect of the national economic complex." At the same time, the theoretical postulates on the social inferiority of cooperatives and their "lower" status from the standpoint of a form of ownership are undermined substantially.

The gigantic importance of cooperation and its truly socialistic nature enabled V.I. Lenin to draw two important conclusions of a scientific and practical nature. These conclusions regarding the importance of cooperation have up until now either been ignored or not noticed. The first of these amounts to a need for "recognizing a basic change in our overall point of view regarding socialism" and the second — for supporting cooperation "beyond the usual" and at least to the level of "heavy industry."

The slighting of cooperation and later the suppression of its principles, especially during the course of forced collectivization, led not only to the negation of the chief statutes of the work entitled "Concerning Cooperation."

Practically Lenin's entire legacy concerning this problem, together with NEP, was discarded (thus acceptance of the destruction of legal socio-economic processes throughout the country since the end of the 1920's was scientifically formulated). Cooperation has acquired the nickname "inferior," that is, socially damaging. It was from this position that we viewed those people engaged in cooperation, although they continued to remain Soviet people.

The situation is changing at the present time. Many kolkhozes, the leaders of which succeeded in defending the cooperative and democratic principles, have proven the vitality of Lenin's ideas regarding cooperation and they serve as an example for state enterprises. Yes and the entire kolkhoz system, despite the fact that very little of a cooperative nature remains in it, demonstrates a more efficient management of affairs than does the sovkhoz system. It is the former ritual in theory. To a definite degree, it has had an effect on the draft Law Governing Cooperation, in which the mentioning of the "leading" role played by state ownership is in conflict with the entry concerning "equal" interaction by the sectors of the socialist economy.

The program has clearly become obsolete. It is not enough to claim the leading role. It must be confirmed and not simply declared. Here it is important to take into account the experience of socialist countries. For example, let us take the 13th Congress of the VSRP [Hungarian Socialist Workers' Party], where it was stated that cooperatives and goskhozes [state farms] play an identical and decisive role in the agrarian and socialist economy. The practical situation in particular, with its production efficiency, the democratic principles of management and administration and so forth require that we take a new look at this problem. On the one hand, we equalize both elements of the national economic complex in the draft and, on the other, we emphasize the leading role played by state ownership and thus we confirm the "second- rate" nature of cooperation. This is hardly correct. For the degree of socialization and the organizational-administrative structure are not the chief criteria. The chief consideration is the status of man in society as the true owner of the means of production and as the direct master of these means and genuine democracy. In other words, here we must advance from man to the program.

ORGANIZATION, PLANNING, MANAGEMENT

UDC 001.8:658.5:621

Machinebuilding Industry Progress, Problems

Assessed
18230028a Moscow STANDARTY I KACHESTVO in
Russian No 1, Jan 88 pp 7-12

[Article by B. N. Sokolov, first deputy chairman of the USSR Gosstandart: "Progress of Machinebuilding—The Basis of Renewal of Industry"]

[Text] The key role in solving problems of accelerating economic development and increasing the effectiveness of public production belongs to machinebuilding. Machinebuilding is the pulse of modernity. New development of individual branches of the national economy depends directly on the condition of this branch. This is what explains the need for more rapid, intensive development of machinebuilding on the basis of the latest achievements of science and a higher technical level of the machines, instruments, technological equipment and means of automation that are produced. Special conferences held in the CPSU Central Committee in August 1986 and July 1987 were devoted to problems of machinebuilding. The party and the Soviet government are striving to create all the necessary conditions for highly effective work of scientists and engineers and for more complete utilization of the significant technical and intellectual potential the country's machinebuilders have.

Providing for accelerated scientific and technical progress in machine-building requires a critical analysis of the preceding period of its development and the disclosure and elimination of those factors that made it impossible in preceding years to raise the technical level of all machine-building products to the level of the best world models.

The main reason for the lower technical level and poor quality of domestic technical equipment should apparently be sought in the existing practice of planning and perfecting designs and in reorganization of production and operation where primary emphasis has been placed on the fulfillment of the plan "in terms of gross output" and scientific and technical activity of the enterprises has been evaluated according to "immediate" savings without consideration of the consequences to which this could lead in the future.

As a result, when designing new items the designers were forced to refrain from the introduction of developments that require large capital investments, particularly reequipping production. Investigations conducted by the Institute of Economics of the USSR Academy of Sciences showed that 85 percent of the innovations that were introduced are being realized at only one or two

enterprises and only 2 percent are being realized at five or more. Only 70 percent of the developments end with the manufacture of experimental models.

Today a task has been set to make scientific and technical progress a major factor in economic growth. The creation of principally new technical equipment, technology and materials and the solutions to large problems that are of revolutionary significance for production—these should be the basis of the scientific and technical programs and comprise the content of the work of design, scientific research and planning organizations. Only progressive technology, the latest generations of technical equipment and new materials with given properties should be the final result of the work of design bureaus and institutes. Only under this condition will they be able to survive under conditions of self-financing and self-supporting production.

The well-known decree of the CPSU Central Committee and the USSR Council of Ministers, "On Measures for Radically Improving Product Quality," is directed toward overcoming negative phenomena related to the unsatisfactory level of planning work, the lack of responsibility of developers of items, poor technological discipline, the unsatisfactory work of technical control agencies and the shortcomings of standards.

This decree has already been discussed as a new stage in the development of state control of product quality [1, 2]. Nonetheless it is necessary to emphasize once again the innovative nature of this document. In the first place, the problem of quality for the first time has come to be considered in the entire spectrum of issues on whose solution the beginning of the necessary change depends; in the second place, the decree has increased the significance of qualitative indicators in management of the national economy; and in the third place, it determined the central significance of the stage of development for providing for a high technical level and product quality.

Among the organizational measures envisioned by this decree the most important is the creation of a special agency for nondepartmental control—a state acceptance agency under the jurisdiction of the USSR Gosstandart.

Taking into account the vanguard role of machinebuilding, state acceptance was introduced first at enterprises of the machinebuilding branches. The serious shortcomings and omissions it discovered (gross violation of technology, exclusion of finishing operations, unsatisfactory condition of testing equipment, nonrhythmic production, poor quality of batching items) required resolute and effective measures to get away from the existing stereotype in the activity of the ministries, departments and their enterprises.... In places where these measures were taken, marked changes took place [3]. The activity of state acceptance is expanding.

The impetus provided by the decree of the CPSU Central Committee and the USSR Council of Ministers, "On Measures for Radically Improving Product Quality," led to movement and engineering thought on the part of both researchers and production organizers. Under these conditions the basic directions of the work became increasingly clear.

The Major Requirement—High Reliability

It is pointed out in the decisions of the 27th CPSU Congress that increasing the reliability of the technical equipment that has been and is being created is a radical problem for scientific and technical progress in the country. The assignment for the 12th Five-Year Plan envisions increasing reliability by a factor of 1.5 and by the year 2000—by a factor of 2 as compared to the level of reliability of machines produced in 1985.

The following data concerning the dynamics of the change of this indicator for world technical equipment show how crucial the problem of reliability is. In the recent past 1 percent of defective items in the batch was considered a good indicator. Now a regular requirement is for the indicator of defectiveness to be 0.05-0.005 percent, that is, from 50 to 500 items per million which break down before the established time period has expired. Japan has already set the task of not allowing premature breakdown in more than 10 items per million.

An analysis of the reliability of a number of kinds of domestic technical equipment conducted by the All-Union Scientific Research Institute for Normalization of Machinebuilding in 1987 showed that the situation in this area remains unfavorable. Because of the low level of reliability domestic machines cannot compete on the world market. The country's national economy sustains immense losses from idle time of technical equipment and also from the need to maintain the increased fleet of machines and numerous repair services and enterprises.

We need a radical restructuring of all work in the area of product reliability.

One of the first tasks is to eliminate the disparity between the theoretical works in the area of reliability and practical engineering activity. On the one hand there are profound and significant theoretical developments and on the other there is practically no utilization of them in the work practice of those who create new models of technical equipment. The reason for this is not only that the qualifications of the designers and technologists are low when it comes to reliability but primarily that the majority of works involve too much mathematics and are intended only for narrow specialists who have good mathematical training.

Works on reliability must lean more in the direction of engineering and the theory of reliability should become not an applied mathematical discipline but a technical and engineering discipline.

It is necessary to improve the practice of perfecting items with respect to reliability during planning. Now in the majority of cases the designer designs items on intuition, utilizing his own previous experience. He learns about the reliability of the items, as a rule, after the beginning of series production from the operational data. Only during this period does the work actually begin for insuring reliability through repeated correction of the design, improvement of technology, and refinement of the time sequences for technical servicing and repair jobs. All this leads to a prolongation of the time periods for development of the items.

Experience shows that the greatest effectiveness is achieved when all of the finishing work for reliability is transferred to the stage of experimental design work and series production begins with an item with which it has been confirmed through calculation and experimental methods that the reliability is no less than is required.

Expenditures on eliminating defects in the sphere of operation exceed expenditures on design and technological measures for eliminating them by a factor of 10. According to data of American specialists, a reduction of operational expenditures by 3-5 percent justifies increasing expenditures on perfecting the items by 15-25 percent.

Engineering insurance of reliability in the stages of scientific research, development, and design of machines and technology of preparation of production, monitoring and all kinds of tests and feedback from the operators should constantly be at the center of attention.

We have now created an interbranch scientific and technical complex entitled "Reliability of Machines." This complex is intended to provide precisely for a comprehensive solution to the problem of reliability and to enlist all forces of science and industry in this.

Standards for the Machinebuilding Complex

In solving the problem of accelerating scientific and technical progress an ever-increasing role is played by standardization, which today penetrates practically all spheres of public production. To an ever increasing degree it is encompassing such machine-building objects as items and technological processes, systems of planning and management, technological complexes and flexible production systems. Standardization makes it possible to successfully economize on labor and metal, to raise the technical level of machines in a planned way, and thus to essentially reduce the time periods for their creation and assimilation.

The existence of the modern normative and technical potential which accumulates the achievements of science and technology, advanced production experience, and

also modern organization of work in the area of standardization is an important prerequisite for implementing the unified technical policy on the basis of standardization when solving the problem of accelerating scientific and technical progress in the country.

The forms existing today—programs for comprehensive standardization, standards with future requirements, standardization of groups of homogeneous products—questions of interreplaceability, and unification—under the new conditions of management all these acquire special significance as methods of centralized management and establishment of those quality normatives which are necessary for further development of the national economy and the insurance of the quality of state orders.

The main requirement for standards and essentially for all normative documentation is the need to establish in them indicators which would be at the highest world level. Now all the newly established standards meet this requirement.

When considering the question of what the standard should be under the new conditions of management taking into account direct foreign economic ties and also in the interests of increasing the ability to compete both in the domestic and in the world market, one should emphasize above all the need to bring the structure of the system of standardization in line with existing world and national practice. A general rule apparently should be to establish in the state standards technical and economic indicators that meet the requirements of international standards that satisfy the consumers and take into account the interests of the state (ecology, safety, and comprehensive requirements for raw and processed materials).

At the same time, in order to provide for the ability of domestic products to compete and to obtain a maximum cost-accounting income, indicators of consumer qualities established in the standards and technical specifications for specific products, as a rule, should exceed the requirements of state and international standards or, in certain cases, correspond to them.

The time has come to make it a rule to have more rapid standardization of raw materials, processed materials and batching items when developing standards for products of metallurgy, chemistry, petrochemistry and other branches that provide for the needs of machine building.

No less important are problems of reducing metal-intensiveness and energy consumption and increasing the productivity of machines and equipment, which should, as was stated at the conference in the CPSU Central Committee on 8 August 1986, "Bring Machine Building to Completely Modern Technology and Advanced Equipment and Give Its Development Real Dynamism."

Industry is faced with the task of accelerating the introduction of new technical equipment by a factor of 3-4. The path of the machine from the technical assignment to planning to its release from the plant should be minimal. Interbranch and branch systems of general technical and organizational-methodological standards are called upon to create an efficient system of parallel actions of all participants in the production process throughout all stages of the life cycle of the product.

A primary role in controlling the quality of machines is played by setting in the standards and technical specifications the maximum permissible (establishing, normative, guaranteed) values of quality indicators. Thus the individual durability of each unit of product (piece, copy) should be no less than the norm for durability for products of the given type established in the normative technical documentation; the individual capacity of the machines—no less than the capacity of machines of the given type established in the normative technical documentation; individual expenditure of fuel of a motor vehicle—no more than the expenditure of fuel established in the normative technical documentation; individual mean time of each unit of product—no less than the established mean time without breakdown; individual margin of error of means of measurement—no more than the maximum allowable value of the margin of means of measurement of the given type established in the normative technical documentation, and so forth. The inclusion in the normative technical and design documentation of the maximum permissible values of parameters that characterize the limits of the field of tolerance has always been the main method of norming technical requirements for products and the basis for technical control of the quality of individual units of products.

Any technical requirement contained in the technical specifications or standards for a product should allow in principle the possibility of verification using one individual unit (or batch) of the product. This is necessary so that all units (batches) of the product can be subdivided into those that are defect-free and those with defects, which is the task of technical control—one of the most important elements of the system of product quality control.

The inclusion in the normative technical documentation of normed indicators of reliability (length of operation without breakdown, service life and so forth) that allow claims to be made for replacement according to the results of supervised operation of each sample of technical equipment individually and the disclosure of the specific guilty parties was a step forward in the area of controlling the reliability through means of standardization. At the present time these indicators have been introduced into 500 state standards and several thousand sets of technical specifications.

At the same time average statistical indicators of quality are becoming very important, including indicators of reliability, which are necessary for evaluating the technical and economic level of a particular kind of product,

and also the quality of the batch, the shift output, or other selection of products, the evaluation or adjustment of technical processes, the application of statistical methods of control, and for calculating the manufacture and delivery of spare parts. These indicators must be included in the corresponding normative documents.

Statistical indicators necessary for technical and economic calculations and justifications are becoming widespread right now, under the conditions of the changeover to economic methods of management of the national economy.

Priority Directions for the Development of Machine Building

Under the 12th Five-Year Plan priority will be given to the development of machinebuilding, the electrical equipment industry, microelectronics, computer equipment, and instrument building. In order to develop these branches it is necessary to open up a broad workforce for standardization and unification.

Further development of scientific and technical progress involves technology above all. New technological processes make it possible to intensify all spheres of public production. Expansion of their application with the simultaneous improvement of the quality of the manufacture of products is a comprehensive problem which includes:

the creation of new equipment, fittings, and instruments;

the creation of automated high-precision control-measurement and testing equipment;

automation of design and planning-technological work and their close intercoordination when putting products into production.

The solution to this problem is envisioned in the Basic Directions for the Economic and Social Development of the USSR During 1986-1990 and the Period Up to the Year 2000 through expansion of the application of progressive base technologies by a factor of 1.5-2 under the 12th Five-Year Plan.

One of the means of accelerating the application of modern technological processes is standardization of technology at both the branch and the statewide levels.

In domestic machine building flexible production systems are being created and introduced at rapid rates. They include highly productive machine tools and automated lines, industrial robots, robot equipment complexes, technological and transportation-warehouse equipment, and computerized control complexes.

The design, production, and operation of this equipment involves considerable expenditures of time, material resources, and the labor of highly skilled specialists as well as the expenditure of costly materials.

The technical level of industrial robots, robot equipment complexes, and flexible production systems determines all stages of planning and manufacture. Therefore it is necessary, beginning with the moment of the formulation of the technical assignment, to orient designers toward the achievement of those values of quality indicators that correspond to or surpass the best world models, taking into account the dynamics of their development and their changes. In this connection it is necessary for both the institutes of the USSR Gosstandart and research organizations of the production ministries to develop work for predicting the quality indicators of this equipment both for the next 2-3 years and for the longer-range future.

An important reserve is the development of measures for evaluating the technical level of items of robot equipment, flexible production systems and robot equipment complexes in the preplanning stage, when one is not evaluating the prepared product for which the money and material and labor resources have already been spent and it is a matter of putting the product into series production, but one is drawing up the technical assignments for the specific industrial robot or robot equipment complex.

An effective means of raising the technical level of this equipment is standardization of the long-term values of the basic quality indicators and strict control over the introduction and observance of standards.

The work for standardization of this equipment is being conducted on the basis of programs for comprehensive standardization which are directed toward the creation of a unified normative and methodological basis that provides for the technical level, block-module construction of flexible production systems, specialization of manufacture, and reproduction of elements, and these determine the bases for unification of flexible production systems and flexible production models in the form of parametric series.

The programs are directed toward providing for a high level of reliability of mechanical elements, devices with numerical program control, electrical mechanical devices and hydraulic equipment through the establishment in the normative documents of values of normative indicators of reliability (trouble-free performance for various devices within the range of 650-6,500 hours and the coefficient of technical utilization within the range of 0.9-0.97), increased shift work of equipment in flexible production systems, increased productivity of metal-processing equipment, increased labor productivity, and the achievement of the scientific and technical level of the best world models of flexible production systems. Special attention has been devoted to the creation of

standard interfaces and program-methodological complexes that provide for combining elements into a system and establishing language, program, instrument and mechanical compatibility. The new standards should raise severalfold the requirements for reliability of all elements included in automated systems and computer devices.

The work projects for standardization of industrial robot equipment envision the development of 135 normative technical documentations for various levels. They will establish clear-cut terminology with respect to robots and items that comprise them, the basic principles for classification, a unified list of the basic indicators, types and basic parameters not only of the industrial robots themselves but of their work performance modules, technical specifications, rules of application, and testing methods.

In order to raise the technical level and improve the quality both of industrial robots as a whole and of their basic aggregates and components, a system is being developed for aggregate-module construction of industrial robots which envisions the creation of unified sets of work performance modules, standard mechanical diagrams of various modifications of industrial robots, and the provision of design, parametric and informational compatibility of the modules, which will make it possible to compose from the final number of aggregates and modules a large diversity of industrial robots for various technological purposes.

Testing and Certification

Testing is an important element in the system of quality control of machine-building products.

But the currently existing testing system at the enterprises does not provide for or guarantee the output of items in keeping with normative requirements.

The utilization of the results of tests is of a one-time nature. There are no methods for combining factographic information obtained in various stages of the life cycles of specific kinds of equipment, from various models of it, or under various conditions that reflect the diversity of operational conditions. The methodology of statistical control is being introduced too slowly.

Questions of the completeness and correctness of tests that are being conducted cannot be resolved without formalized rules for the utilization of factographic information when conducting the basic measures for quality control.

This problem can be resolved only by state testing centers whose main task should be to develop and implement standard (exemplary) technological processes for testing that are characterized by high precision of the measurements that are taken and the reproduction of test influences and also high reproducibility of the results

of tests, their compatibility with the results of tests conducted abroad, and a high level of adequacy of conditions and modes of operation for the tests to the standard conditions and modes for operating machines, equipment, and instruments.

A most important role in providing for objectivity of the evaluation of the technical level and quality of items that are produced is to be played by the system of certification, which because of the sharp aggravation of the problem of the quality of products that are produced and consumed throughout the world, have become widespread at the national level and to a large degree at the international level. The existence of a certificate that establishes the quality of the product and the results of its tests in recognized international centers for certification today is an indispensable condition for entering the foreign market and an indicator of the ability to compete. In October 1987 a CEMA session approved the convention "On Certification in the CEMA."

But on the whole the creation of centers for certification is proceeding unsatisfactorily. As a result of this the state sustains large losses of currency used to pay for certification of our products in other countries and the exporting of a number of items suffers.

For successful functioning of the system of certification testing centers and laboratories for the most important kinds of machinebuilding products should be created within the system of the USSR Gosstandart and they should be the bearers of the standard technological processes for testing products. Centers for testing and certification should function on the basis of self-support and self-financing, which will give them motivation to expand the list of products assigned to them as well as the list of controlled parameters.

The USSR Gosstandart is faced with large tasks: state acceptance and testing, certification and the development of standards for products, norm-setting for reliability and methods of providing this—such is the range of problems that will have to be dealt with in the next few years in order to solve the problem of achieving the highest world level of the machines, equipment and instruments that are produced.

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Reconstruction, Retooling of National Economic Sectors Detailed
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[Article by V. Shcheglovskiy, candidate of economic sciences: "Reconstruction and Technical Reequipment of the National Economy"]

[Text] Changing the economy over to a basis of intensive development depends largely on prompt and constant updating and technical reequipment of all branches of the national economy. This is a large reserve for increasing the effectiveness of the country's economic potential. The considerable scale of fixed capital that has been created (about 1.7 trillion rubles as of the beginning of 1987) requires large expenditures on maintaining it at the proper level. At the same time the accumulation of outdated and worn-out means of labor impedes the improvement of economic indicators of the activity of the enterprises. While fixed production capital has grown by a factor of 7.3 since 1960, the gross social product and the produced national income has increased only by a factor of 4.

A radical renewal of the technical base for production is a complex problem. In this connection it is important to have an economically substantiated selection of forms of reproduction of capital and optimization of the proportion partial replacement through modernization, reconstruction and capital repair and complete replacement with new capital.

In the modern stage scientific and technical progress is proceeding into essentially different directions. The first is related to the partial improvement of technological processes, designs of machines, their modernization, the creation of modifications of instruments and equipment, improvement of the qualitative parameters of the products and so forth while generally retaining the traditional technical equipment and technology. The second consists in a changeover to principally new technological systems and qualitatively new kinds and generations of machines and equipment.

Sometimes one hears the opinion that it is inexpedient to distinguish the concepts "technical reequipment" and "reconstruction." It seems to us that a clear distinction is necessary for there are principal differences in the directions of these processes.

Technical reequipment of existing enterprises includes their technical development carried out in keeping with the plan, complete or partial replacement according to a unified plan of old equipment with new equipment that provides for an increase in the gross (commodity) output, a reduction of the number of production personnel, and savings on energy or other material and technical resources. Technical reequipment is usually intended to

raise the level of mechanization and automation of production processes, introduce new technology, improve organization, replace worn-out and obsolete equipment with more productive equipment, eliminate bottlenecks, increase labor productivity, reduce production costs, and so forth.

Measures for technical reequipment should be carried out, as a rule, within one year. When the overall amount of work lasts longer than this it is carried out in sequence.

The reserves for increasing savings that are provided by this direction of scientific and technical progress are far from exhausted. There has been a marked reduction of the advantage from technical reequipment. In practice it has reached the point where the utilization of traditional technological principles can at best only preserve the existing relationship between the USSR economy and that of other industrially developed countries. Moreover, in this direction of scientific and technical progress expenditures and prices for technical equipment created on the basis of modernization are very rapidly outstripping the growth of the useful effect, including productivity and other technical and economic parameters.

Reconstruction of existing enterprises includes complete or partial reequipment and restructuring of basic and auxiliary production shops on the basis of new technical equipment and technology with the replacement of obsolete and worn-out equipment with new, more productive equipment, the introduction of new technology, the raising of the level of mechanization and automation of production, elimination of disproportions in technological units and auxiliary services, and so forth. Reconstruction frequently involves replanning and restructuring of the buildings and structures for basic production, an increase in production areas, and the construction of new and expansion of existing facilities for auxiliary and service purposes in order to improve working conditions and eliminate disproportions that have arisen. Reconstruction presupposes the utilization of existing buildings, structures, utilities, and structural elements because most of the expenditures are used for updating the active part of fixed production capital; the volume of construction and installation work in the estimated cost of reconstruction, as a rule, should not exceed 35 percent.

For practical realization of this direction of the investment policy it is necessary to have a mechanism for introducing scientific and technical discoveries on a statewide scale, including a system for tracing, evaluating and submitting information about world discoveries that make it possible to revolutionize technology. More important, it is important on a large scale to direct the necessary resources specifically for the introduction into production of the discoveries of domestic and foreign science (including for currency) in those branches where the discoveries were made.

Of course under these conditions fundamental and applied science should be oriented toward research and the creation of principally new technologies, technical equipment and materials that increase the effectiveness of production many times over, primarily in the base, priority branches of industry.

Current updating of fixed production capital can be provided through the implementation of measures related to their constant renewal without increasing the planned capacity of the enterprises. This can be changed upon expiration of the periods of service of equipment, machines, means of transportation, fixtures, instruments, and production inventory; the construction of individual buildings and structures related to maintaining the achieved level of existing capacities that are not included in the plans for technical reequipment and reconstruction of enterprises.

A significant reserve for increasing the effectiveness of the economy consists in an optimal combination of these directions of scientific and technical progress.

Under the current five-year plan the proportion of capital investments in technical reequipment and reconstruction is increasing; in 1988 it reached approximately 45 percent and by 1990 it will amount to 50.5 percent. On the whole for the five-year plan expenditures for these purposes will amount to about 235 billion rubles. There are many examples in which technical reequipment and reconstruction are producing a significant economic effect. Thus the best indicators in the branch were achieved as a result of technical reequipment of blast furnaces. Labor productivity in blast furnace production increased by 20 percent and recasting of iron exceeded the plan level by more than 100 million tons a year. Moreover all the increase was obtained as a result of reconstruction and modernization of equipment.

As a result of the reconstruction of the Brovarskiy Plant for Powder Metallurgy its capacity doubled and amounted to 30,000 tons of powder a year. All expenditures of the enterprise will be recouped in 5 years. Effective kinds of sinter items made of iron powder were introduced (friction disks, refractory items, antifriction items). In 1971-1986 the economic effect from the application of products of this plant in the national economy amounted to 133 million rubles.

At the same time a considerable proportion (up to 65-70 percent) of the capital investments for this purpose were not related to an increase in capacities. For example, under the current five-year plan 8.8 billion rubles were allotted for technical reequipment and reconstruction of existing nonferrous metallurgy enterprises, or 56.9 percent of the overall quota of capital investments, which is more than in the preceding 5 years by a factor of 1.5. The output-capital ratio in the branch during 1986-1990 will decrease by 17 percent. This situation was caused by the low level of effectiveness of capital investments for

technical reequipment, which largely amounts to replacing worn-out equipment with new equipment which have similar technical and economic indicators but is more expensive.

For 16 enterprises of the Ministry of Power Machine Building, the Ministry of Heavy Machine Building, the Ministry of Chemical Machine Building, the Ministry of Agricultural Machine Building, the Ministry of Machine Building for Animal Husbandry and Fodder Production, the Ministry of Instrument Making, Automation Equipment and Control Systems, and the Ministry of the Machine Tool and Tool Building Industry, where reconstruction was carried out, the proportion of construction and installation work amounted to 61-89 percent. The situation was similar at many reconstructed enterprises of the chemical and other branches of the national economy.

Analysis shows that with other variants of plans this work could be reduced, including in 1988, by a minimum of 2.5-3 billion rubles. No less than half of the money saved could be used by the enterprises to acquire additional equipment and the rest of it—for the construction of facilities for social purposes. The large shortcomings in the utilization of money spent by the enterprises for technical reequipment and reconstruction from the fund for the development of production show the need to revise the policy for priority allotment of resources, including equipment.

It is expedient to include technical reequipment in the processes of reproduction only under the condition that there is an increase in capacities or an increase in labor productivity of no less than 25 percent as compared to the actual level. Therefore expenditures related to updating existing fixed capital without increasing capacities can be included in technical reequipment and reconstruction and the rest of them—maintenance of production capacities.

The time periods for the implementation of plans for technical reequipment of existing enterprises should not exceed 5-6 months. In certain cases, for especially complicated plans for technical reequipment, they can be increased to a year. The time periods for assimilating new technical equipment should not exceed 1-3 months.

The main forum of state planning and technical reequipment of production are the five-year plans whose assignments are concretized and refined in the annual plans taking into account scientific and technical progress, the development of the enterprises and also the resources that are allotted. The plans for technical reequipment should envision the growth of production (in physical and value terms); the release of workers; savings on material resources including energy resources; growth of the output-capital ratio; the coefficient of renewal of the

active and passive parts of fixed capital; and the indicator of proportional capital investments per unit of increase in production capacities and per one ruble of increase in the production of products.

Thus the five-year plan for technical reequipment is the main program document for the development of enterprises of the entire subbranch. Therefore measures of plans for technical reequipment must envision solving the following problems: development and improvement of production for purposes of more complete satisfaction of the needs of the national economy and the population for products produced by the enterprise; assimilation of the production of new and better items; increased output of products of the highest quality category; growth of labor productivity and the effectiveness of production; maximum utilization of production capacity; increased effectiveness of capital investment; reduction of production costs and increased profitability of production; and improvement of planning, management, and cost accounting.

Practice has shown that only such a comprehensive approach to solving problems of technical reequipment produces an effect. And by directing these efforts toward the realization of individual, even though extremely important aspects of technical reequipment, the enterprises do not achieve optimal technical and economic results.

Since problems of technical reequipment are of an interbranch nature it is important to clarify (no later than a year before the beginning of the planned year) the need for equipment, including nonstandard equipment, machines, mechanisms, fittings, means of automation, instruments and also other elements of the active part of fixed capital, with the determination of this need individually for the key branches of production whose products determine the technical level and progress in all other branches of the national economy.

In addition to direct losses from the failure to receive products, lengthy assimilation of new capacities leads to a retardation of the rates of scientific and technical progress, taking into account the fact that the period of the achievement of the planned indicators at new capacities frequently lasts up to 3-5 years and the plans become obsolete. At the same time, with well-thought-out preparation for assimilation many capacities can reach the planned level before the expiration of the normative time periods. In 1986 at only 26 enterprises and other facilities whose assimilation was carried out ahead of the norms, they obtained an additional 37 million rubles' worth of products or 13 percent more than envisioned in the plan. For example, at the Korshunovskiy Ore-Enriching Combine in December 1984 they introduced the first start-up complex at the Rudnogorskiy Mine. During 1985-1986 the actual extraction of ore amounted to 3.3 million tons, which exceeds the planned level by 1.7 million tons or 109 percent.

Taking positive experience into account, in order to stabilize the output-capital ratio and accelerate the introduction of scientific and technical achievements, it would be expedient to consider the issue of preparatory work for the assimilation of newly introduced production capacities, as a rule, simultaneously with startup and adjustment work. This will make it possible, according to the estimate of the USSR Stroybank, to obtain an additional 14-15 billion rubles in national income annually.

Beginning in 1986, assignments for updating machine-building products have been established in the State Plan for Economic and Social Development. But during the past 2 years we have not managed to reach the planned rates. The plan for 1988 envisions renewal in the amount of 9.2 percent, which corresponds to the assignment of the five-year plan for this year. This indicator provides for a level of renewal of output that ensues from the average actual norm of amortization of machines and equipment, which in 1986 amounted to 7.8 percent in industry.

In 1987 the output of items from the machine-building complex as a whole outstripped the rates of their increase in all other branches of production by a factor of 1.2. There was priority in the development of the production of products of the basic branches of machine building: machine tool building, instrument building and the electrical equipment industry. The rates of their growth in the aforementioned branches exceeded the rates of increase of output in machine building as a whole during 1987 by a factor of 1.2.

The technical level and the quality of machines and equipment that are produced have improved, the updating of machine-building products has accelerated by a factor of 2.9, and in 1987 it reached 9 percent as compared to 7.6 percent according to the plan and 3.1 percent in 1985. The proportion of the most important kinds of items that correspond to the world technical level in the overall volume of their production increased for the machine-building complex as a whole from 29 percent in 1986 to 49 percent in 1987. In 1987 we assimilated about 2,800 models of new technical equipment that correspond to the world technical level.

Additionally, many enterprises continue to produce outdated technical equipment, their quality is slow in improving, and the metal-intensiveness is high. For example, the proportional metal-intensiveness of individual kinds of generators and towing engines produced by enterprises of the Ministry of the Electrical Equipment Industry is twice as high as that of their foreign analogues. Equipment for steam engines and urban transportation, electric drives for machine-tool building and robot equipment, and mobile electric power stations is below the world technical level. In 1988 only 40 percent of the passenger cars, 25 percent of the automatic loaders, and 55 percent of the computer equipment will correspond to the world technical level.

The introduction of state acceptance has produced certain positive results. At many enterprises the organization of production and labor has improved, technological discipline has become stronger, and the responsibility for the manufacture of high-quality items has increased. But every fifth enterprise was unprepared for the requirements of state acceptance.

A large reserve for improving the utilization of the production potential is increasing the coefficient of shift work of equipment which in a number of branches machine building for more than 20 years has been 1.4-1.5 and at individual enterprises the equipment has not even been fully loaded for one shift.

The changeover of enterprises to a two- and three-shift work schedule is taking place slowly and frequently it affects only individual kinds of equipment. As a result, the loading of equipment as a whole is not improving. The coefficient of shift work of metal processing equipment in basic production in the machine-building complex amounted to 1.45 as compared to 1.59 according to the plan and 1.46 in 1985. This pertains especially to highly productive equipment. As a rule, it operates on less than two shifts and at the majority of enterprises of the Ministry of Heavy Machine Building and the Ministry of Agricultural and Tractor Machine Building—1-1.5 shifts, and at the Kolomenskiy Heavy Machine Tool Building Plant Production Association and the Ryazin Machine-Tool Building Production Association of the Ministry of the Machine Tool and Tool-Building Industry—less than one shift.

At many enterprises there has not been a radical restructuring in the reorganization of production and labor. Enterprises of the machine-building complex last year operated unrhythmically. About 70 percent of the volume of the monthly output was produced in the third 10-day period and even in the last 3-4 days. Such organization involves an increase in the demands on production areas and technical equipment and reduces the output-capital ratio. The utilization of machines on one shift when there is idle time within the shift leads to a situation where the machines become obsolete 2-3 times earlier than they become worn out and the economically ineffective implements of labor continue to be used in production.

Under these conditions machine-building, metallurgy, and other branches do not manage to satisfy the need for the output of machines. It is impossible to significantly reduce the normative time periods for their service and there arises the problem of capital repair, which takes large amounts of resources even though after it the operational parameters of the machines, as a rule, do not even amount to 90 percent of those of new machines. Along with the increase in the actual service life of the implements of labor there are increased expenditures of

time and money on their technical operation, including the expenditure of spare parts, fuel, lubricants and expenditures on maintaining the machines in working condition.

The reequipment of the national economy on a new scientific and technical basis should take place with a simultaneous increase in the rates of economic development in spite of the fact that the very process of reequipment requires time and, naturally, during the period of its implementation there is a reduction of the output of production capacities. There arises the question: how when solving long-range problems does one provide even today for the rates of growth of product output that are earmarked by the five-year plan?

It seems that at each enterprise it is important to develop and introduce organizational and technical measures directed, if necessary, toward increasing production capacities and especially toward better utilization of them. Available data show that it is possible without large capital expenditures to annually increase production capacities by a minimum of 1.5 percent and to increase production volumes by no less than this. Of course this must not take place to the detriment of product quality.

The main reasons for prolonged dissimilation and underutilization of plan capacities are the lack of coordination that arises because of shortcomings in the planning of capital construction and the production of products and also the work that is done for normal organization of the process of operating newly introduced capacities. For these reasons in 1986 the planned capacities of all enterprises and other facilities were underutilized by approximately 50 percent. As a rule in terms of their technological parameters they are prepared for operating at the planned level but because of the inadequate responsibility of economic agencies for the effective utilization of the production potential and the tardy resolutions to issues of personnel training, delivery of raw and processed materials, product sales, and provision of housing and social, cultural and domestic facilities for the people, they produced a considerably smaller volume of products than is envisioned by the plans.

An example of a lack of coordination within the branch can be the assimilation of capacities for producing products for a sum of 7.2 million rubles that were introduced in the fourth quarter of 1986 at the Kamenets-Podolsk Plant for Agricultural Machines of the Ministry of Tractor and Agricultural Machine Building. In keeping with the plan the planned capacity this year will be utilized by only 79 percent, mainly because of the failure to deliver batching items by enterprises of the Odessapočhvomash Production Association of the same ministry.

The main reason for the incomplete assimilation of capacities is the lack of qualified personnel to fill the newly created positions, as a rule, because of the tardy construction of facilities of the social sphere.

Yet increased effectiveness of production involves more complete utilization of the production potential, above all fixed capital. Still in industry the tendency toward reduction of the output-capital ratio remains. In 1986 the output of commercial products per 1 ruble of production capital amounted to 1.08 rubles and it had decreased by 19 kopecks or 15 percent as compared to 1980. And the level of their utilization dropped in almost all branches, particularly in the petroleum industry, nonferrous metallurgy, heavy energy engineering, agricultural machine building, and light industry.

The reduction of the output-capital ratio leads to a situation where an ever greater volume of capital investments are required to obtain the same increase in output. Thus while during the years of the 8th Five-Year Plan a 1-million-ruble increase in output in industry was provided by increasing fixed capital by 640,000 rubles, under the 9th, 10th and 11th five-year plans this same increase in output required an increase of fixed capital by 743,000 rubles, 1,216,000 rubles and 1,543,000 rubles, respectively.

In 1986 144 billion rubles' worth of fixed capital were introduced and 45 billion were eliminated, that is, in a ratio of 3.2 to 1. On the basis of the fact that the eliminated capital had an average life span of 25 years, this ratio would actually be 1.74 to 1 since the output-capital ratio has decreased by half since 1960.

This structure of the technical level of machines and equipment is also reflected in the shortcomings of the entire reproduction process, the utilization of the active part of fixed capital, and the quality of the products that are produced. This also shows the extremely inadequate technical level of the equipment that is produced in the country.

The reasons for this phenomenon lie primarily in the partial improvement of production while basically retaining traditional technical equipment and technology. The increase in prices for such machines and equipment considerably outstrips the improvement of their consumer qualities. It is necessary on the basis of an analysis of the reasons for the increased costs to develop for the various groups of equipment the maximum normative of price changes according to productivity, and planning and design-technological organizations must take these into account in their estimates. While maintaining the tendency toward decline of the output-capital ratio a situation can arise wherein it will be necessary to spend more and more in order to maintain the production apparatus at the level that has been reached. In overcoming such a situation it is very important to utilize machine-building capacities better and to bring them up to a qualitatively new level.

In 1985 because of the reduction of the output-capital ratio during the years of the 11th Five-Year Plan we failed to receive more than 20 billion rubles' worth of products. This means that more than one-fourth of the

65.5 billion rubles' worth of capital investments in industry in 1985 did not go for increasing production but for compensating for losses from the reduction of the output-capital ratio.

In recent years the growth rates of fixed production capital have slowed down. Under the 9th Five-Year Plan the average annual increase amounted to 8.6 percent, the 10th—7.6, the 11th—6.7, and in 1986—5.5 percent.

According to data of the USSR State Committee for Statistics, under the current five-year plan capacities of the machine-building complex are being utilized by 85-91 percent, and for individual kinds of products—even less (for gas turbines—by 48-52 percent, energy reactors—67 percent, excavators with bucket capacities of 4 cubic meters and more—78-82 percent, and generators for steam, gas and hydraulic turbines—by 65-75 percent). To a certain degree this was the result of the failure to provide certain kinds of rolled metal and also mistakes in determining the need for the corresponding kinds and types of equipment as well as in the planning and creation of related capacities of enterprises both within the same branch and associated branches.

The June (1986) Plenum of the CPSU Central Committee made it incumbent on the ministries and departments to radically raise the technical and economic level of the plans for technical reequipment and reconstruction. Those that do not correspond to the tasks of accelerating scientific and technical progress are to be abandoned and the resources that are released are to be used for the development of the production of advanced technical equipment. We must not allow billions of rubles to be invested in obsolete facilities that are based on unsuitable technical solutions.

When the ministries and planning organizations take a responsible approach to solving this problem they make maximum use of the achievements of science and technology and indicators of the highest world level are achieved in the plans. Thus after the completion by 1990 of the construction according to the revised plans of the Sterlitamak Plant for the production of high precision machine tools for instrument bearings and the Alma-Ata Machine Tool-Building Plant imeni 20-Letiye Oktjabrya, labor productivity will correspond to the level of the best foreign firms and significantly exceed the assignments established for the branch by the end of the current five-year plan. There will be a radical renewal of the products of these enterprises and about 90 percent of them will be included in the highest quality category.

Moreover the analysis of the technical and economic indicators of 1,500 plans for construction and reconstruction of industrial facilities and the selective expert evaluation of the USSR Gosstroy and the State Committee for Science and Technology showed that the task of radically improving the quality of the plan is being carried out unsatisfactorily. Planning decisions are frequently revised without any essential changes in the

technological processes or savings on material and technical resources. As a result, there is an increase of technical and economic indicators in only one-fifth of the revised plans and less than 10 percent of them correspond to world achievements. For the majority of plans the ministries have approved a high level of previously adopted planning decisions which essentially meet the requirements of the past five-year plan. For all of the plans that were inspected after their revision labor productivity increased by only 5 percent, the profitability of production—by 1 percent, and the output-capital ratio did not increase. But even with these characteristics the ministries continue to include them in the plans for capital construction.

Special concern is caused by the fact that there is no radical improvement in the plans for construction projects of the machine-building complex. Of the 754 plans only 320 envisioned an insignificant rise in the technical and economic level. And labor productivity increases by only 9 percent, and the profitability of production—by 2 percent. Only 50 plans or 6 percent of them correspond to the best foreign analogues. Every second one of the plans previously revised by the ministry during the selective inspection by the State Board of Experts of the USSR Gosstroy was returned for further work.

The time for recouping investments on half of the plans inspected by the Ministry of the Automotive Industry averages 10 years and more (the Yartsev Foundry, the Krasnoyarsk Plant for Truck Trailers and others), which practically does not provide for returning the invested funds to the national economy since within 5-6 years the technical solutions that have been adopted become outdated and there is a need to replace the equipment.

The poor effectiveness of the revision of many planning decisions is the result of the fact that the ministries and departments are conducting this work in the old way, separately from the labor collectives, which does not correspond to the Law on the State Enterprise. As before there is the crucial issue of improving the organization of planning technical reequipment and reconstruction of production. Planning has changed from an accelerator of scientific and technical progress to an impediment.

The dissemination of intensive forms of expanded reproduction is held back by existing provisions that regulate the policy for carrying out technical reequipment and reconstruction. They were not developed comprehensively, taking into account the high growth rates of capital investments and the volumes of new production. Therefore certain enterprises are critical about the plans that have been developed for them and are demanding a radical change.

The norms and rules for designing, planning and the practice of financing and providing material and technical support, the characteristics of the technological equipment that is produced, and also the incentives for

carrying out technical reequipment and reconstruction up to the present have not fully taken into account the specific nature of these forms of reproduction of fixed capital and do not provide for their priority. Not enough scientific research work is being done on problems of technical reequipment and reconstruction.

Planning-research organizations are not interested in performing work for technical reequipment and reconstruction of existing enterprises since they frequently sustain losses and do not fulfill assignments for increasing labor productivity.

Variant planning and planning on a competitive basis contribute to raising the technical and economic level of planning decisions. This is especially important when carrying out plans for reconstruction and technical reequipment, when it is necessary to introduce new technical equipment and technology more effectively into existing production and as much as possible to avoid a reduction of its volumes.

The quality of the plans for technical reequipment and reconstruction of enterprises depends largely on the technical and economic indicators of the new equipment that is intended to replace the old equipment. Frequently with this replacement the output-capital ratio and the yield of products per 1 square meter of production space decrease since the increased sizes and prices of the new equipment considerably exceed the growth of its productivity. For example, the productivity of the new carousel lathe machine 1A525MFZ, which replaced the 1525F1 machine, increased by a factor of 2.2 while its cost increased by a factor of 4. It would seem that it is necessary to revise existing methods for establishing prices for new equipment so that the change in these corresponds to the growth of its productivity.

Effectiveness decreases especially with the modernization of productions that are located in old buildings, which comprise approximately 600 million square meters or almost 50 percent of all the production areas in the country. This is explained by the large, disproportionate sizes of the new equipment. In order to put out highly productive smaller technical equipment that corresponds to the world level in terms of its technical and economic indicators, it is expedient for the plans for mass production of machines to undergo state expert evaluation.

The changeover of enterprises to complete cost-accounting and self-financing and the essential expansion of their rights in utilizing the money they earn are not accompanied by an increase in their responsibility for effective expenditure of funds intended for reproduction. Analysis shows that enterprises that have been given the right to independently establish plans for capital construction frequently reduce the assignments of the five-year plan for the startup (increase) of production capacities. Plus in their counterplan enterprises of the Ministry of Chemical Machine Building reduced the

introduction of capacities for 1987 as compared to the five-year plan by 18 percent, and the increase in capacities for initial processing of petroleum in the USSR Ministry of the Petrochemical Industry was reduced by the enterprises severalfold for 1987. A similar situation arose in 1988 with respect to the increase (startup) of capacities for individual kinds of products that was to take place as a result of technical reequipment and reconstruction of production. For example, the increase (startup) of capacities for producing knitted items according to the annual plan for 1988 amounts to 66 percent of the five-year plan, nonfabric materials—48 percent, synthetic ammonium—65 percent, and so forth.

In 1987 the plan for startup of fixed capital through state capital investments was not fulfilled by a single ministry. The situation was especially satisfactory in the USSR Ministry of the Petrochemical Industry where this indicator is only 53.4 percent, the Ministry of Chemical Machine Building—75.2 percent and the Ministry of Instrument Making, Automation Equipment and Control Systems—89.3 percent.

On the whole for ministries of enterprises operated under conditions of complete cost accounting in 1987 the amount of fixed production and nonproduction capital that was introduced was 0.6-24.7 percent less than in 1986. The plan for startup of fixed capital at the expense of the enterprises is not being fulfilled either. And for the Ministry of Instrument Making, Automation Equipment and Control Systems in the Ministry of the Automotive Industry this plan was fulfilled by 75.5 and 65.4 percent, respectively, which is considerably less than the overall average for the plan for state capital investments in these ministries (89.3 and 99.9 percent).

One of the reasons for the reduction of the startup of production capacities is the shortage of progressive, highly productive equipment, and the fact that it is not delivered in complete sets or delivered promptly. In certain cases the contracting construction and installation organizations do not accept labor-intensive jobs under the crowded conditions of existing production. And it is impossible to do it by the in-house method at previously planned times because of the weakness of the construction subdivisions of the enterprises.

During the course of implementation of the plan certain enterprises do not provide their own financial means for the capital investments for technical reequipment and reconstruction of production which they announce along with the drafts of the plans. At the same time they do not take advantage of the possibilities of obtaining bank credit and postpone increasing production capacities until later dates, which reduces the possibilities of increasing product output. Moreover the enterprises do not bear economic responsibility for failure to utilize recourses of equipment and materials. When the enterprises themselves change the plan the resources allotted for the previously declared volumes of work are not reduced.

The main thing is that under these conditions the control of capital investments both on the part of the ministries and departments and on the part of the central planning agencies should be provided mainly by economic methods and the introduction of the achievements of science and technology and the creation of new capacities on that basis should become the main production interest of the enterprises.

The failure to fulfill plans for the startup of fixed capital leads to diverting investment resources into incomplete construction which is increasing and for the Ministry of Chemical Machine Building it reached 147.6 percent of the annual volume of capital investments. Above-normative incomplete construction for this ministry amounted to more than 400 million rubles and for the USSR Ministry of the Petrochemical Industry—962.9 million rubles, exceeding the normative by 74 percent.

At the same time another tendency was clearly manifested. Industrial ministries whose enterprises operate under the conditions of complete cost accounting fulfilled the plan for the construction of housing by 101.2-109 percent. In 1987 they introduced more than 2 million square meters of residential space. At the expansion of social construction and the development of cost accounting are taking place at the expense of redistributing the quotas of contracting work. Therefore a possible violation of the balance of the five-year plan is causing alarm among the ministries, in whose opinion the startup of capacities that determine the developmental branch should be provided under any conditions. Under these conditions it is necessary to strengthen centralized management of the investment process that in the framework of the established five-year plan and, perhaps, permit labor collectives that fulfill the plan for increasing capacities to utilize the savings on the fund for the development of production, science and technology achieved as a result of the application of progressive technical solutions for the expansion of housing construction and the satisfaction of other needs.

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Management Training Program Described
18239943 Moscow SOTSIALISTICHESKAYA
INDUSTRIYA in Russian 25 May 88 p 3

[Unattributed article; "Training for Cadres"]

[Text] At the Institute for increasing qualifications of leaders in higher links of state management under the USSR Council of Ministers' Academy of the National Economy a program has been completed for increasing the qualifications of responsible workers of the Bureau of the USSR Council of Ministers for Machinebuilding and the Fuel-Energy Complex.

During the course of training the main questions of economic strategy and practice for radically restructuring the system of managing the economy were studied, as well as questions on improving the organizational structure in the management of union, union-republic and republic ministries and departments, central planning and finance-credit organs and also those for price formation, material-technical supply and statistics.

Particular attention in the training process was devoted to organizational, economic, legal and psychological problems of restructuring the management of social-economic processes, the style and methods of leadership under the condition of implementing the USSR Law on the State Enterprise (Association), the changeover to complete economic accountability and self-financing and the deepening of democracy and glasnost.

A detailed exchange of experience took place at the seminars and the concluding sessions JBE

PRODUCTION

UDC 001.8:621:658.5.011.56

Improvement in Design, Production of Test Models Urged

18230029a Moscow STANDARTY I KACHESTVO in Russian No 1, Jan 88 pp 13-18

[Article by V. F. Kurochkin, director of the All-Union Scientific Research Institute of Normalization in Machine Building: "The Module Principle in the Arrangement of Technical Equipment—The Basis of Accelerated Development of Machine Building"]

[Text] At the present time domestic machine building is faced with tasks that are principally different from those that had to be resolved in previous stages of development. Then technical equipment even with one and the same functional purpose and with analogous parameters was created according to an individualized design. The tasks of accelerating scientific and technical progress predetermine the need for the appearance of new methods of constructing technical equipment that made it possible to sharply reduce the time periods for planning, development and assimilation, and to simplify the operation and make it less expensive. This was brought about by the following factors:

the structure of production has changed sharply. Today 70 percent of the products of machine and instrument building are manufactured at enterprises with series production and approximately 40 percent—in small series;

the dynamics of production have increased significantly. Each year 3,500-4,000 machine- and instrument-building items are placed into production;

the time periods for obsolescence of technical equipment have decreased sharply;

the requirements for mobility of production, its productivity and its economical operation have increased.

Under these conditions the development, production and operation of technical systems whose designs are based on the principle of aggregate-model construction of technical equipment become one of the basic directions for the development of domestic machine building and instrument making.

The Basic Directions for the Economic and Social Development of the USSR During 1986-1990 and the Period Up to the Year 2000 note the need to implement measures for creating machines, equipment and instruments on the basis of unified block-module and base designs and increasing the output of multifunctional kinds of technical equipment, batching items for flexible production systems, industrial robots, and means of automation.

In essence we have on the agenda the question of changing over to technical equipment of a new generation on the basis of large sets and modules, that is, unified components that consist of interreplaceable mass-produced parts that perform relatively independent functions in various kinds of technical devices.

The production of technical systems made of a strictly limited set of standard structures for multiple application will leave machine building into a qualitatively new stage of development.

The introduction of module principles makes it possible to solve the problem of providing any technological process in machine building with a set of elements which, with proper combinations, make it possible to assemble any technical system for manipulation and processing of parts, blank pieces, assembly units, and so forth.

The utilization of module methods for the creation, assimilation and operation of technical equipment determines a principally new content of modern production which provides for a sharp rise in the technical level of the machine-building products. This is manifested mainly in series and small-series productions with partial changeover to new items, which makes it necessary to replace a significant proportion of the specialized technological equipment and fittings.

Unification and building-block design and, on the basis of these, set-module principles of design, adjustment, manufacture and operation of new technical equipment not only expand the range of problems resolved during the process of its creation, but also lead to a radical change in views on the possibility of generalizing previously isolated design and technological solutions and reducing them to a unified technological system that

functions in the main branches of production. The development of theoretical principles of the set-module approach in technical equipment is the basis not only for changing traditional methods of planning, production and operation, but also the basis for developing principally new criteria for evaluating technical systems.

Methods of unification and building-block design on which the module principle is based have recently become very widespread in machine building and especially in machine tool building for various kinds of machine tools have been developed and manufactured as design unified on the basis of similar sizes and functions of constituent parts which are called sets in machine tool building. It is here that the functional unit or set method of creating series and families of various kinds of machine tools was empirically generated. Having unified series of sets for various functional purposes it is possible to satisfy a large proportion of the demands of production for the list of final items while obtaining an effect of a relative reduction of a certain number of kinds of constituent parts.

An example of consistent unification on the basis of methods of building block design is the development by the All-Union Scientific Research Institute of Road Construction Machine Building of a module system for forming tower cranes with various purposes on the basis of a narrow series of unified element-modules grouped in a single catalogue.

According to the module system all cranes consist of individual modules which can be combined with each other in various combinations. Moreover, from 22 individual kinds of modules with the addition of special unified components one can create 350 models of various tower cranes.

The principle of batching items with a large diversity of characteristics out of a small number of primary general element-modules is used in practically all items of modern electronic equipment and instrument building.

The first building block complexes in our country were created for the construction of systems for automatic regulation that operate on elements of automation. These elements were unified in terms of sizes and methods of joining the modules who in the simplicity of their use with pneumatic equipment provided for their high level of reliability.

Then the idea of utilizing a limited set of technical means for creating complicated devices and systems was adopted in the Ministry of Instrument Making, Automation Equipment and Control Systems where it was further developed. Here the system of automated regulation includes standards for more than 2,000 types of items whose development is based on the following requirements:

unification of standard design;

observance of principles of compatibility, including functional, energy, metrological, operational and, as a result, unification of bearing structures—design compatibility;

the building block principle of construction;

efficient construction of unified type sizes of series of items.

When constructing technical systems according to the set-module principle the final items are given a common technological nature even though their purposes can be extremely different. As a rule, the number of these items considerably exceeds the number of unified constituent parts. With this approach it is possible to formulate the following basic requirements for the constituent part as a basic element of the set-module system:

the performance of a particular function (strict formalization of conditions for functioning);

size regularity and compatibility;

parametric compatibility;

the possibility of utilization in various final items, that is, a certain universality of functions and a high level of quality.

Size compatibility is provided by strict norming of the tolerance-joint sizes. In the case of series of constituent parts such as in radio electronics and instrument building this is done through preliminary norming of the spacing of the printed plated and the multiple sizes of the cells, blocks, and cabinets.

And the establishment of a network of sizes on the basis of some module is a means of geometric compatibility. This is only a necessary condition for module planning and not a method of creating various items on the basis of a particular series of unified constituent parts.

Two concepts for understanding the principle of module planning have developed in domestic practice.

The first has in mind the creation of any objects with multiple, most frequently linear sizes of constituent parts but various functional purposes within the limits of the object in which they are included. In the modern understanding they can be called unified according to the sign of the module of linear sizes.

The second, modern concept calls module planning the creation of final items out of unified constituent parts that provide for their compatibility both in terms of sizes and in terms of other functional parameters. Here the

modules can be permanent structural units (sets, components, blocks, sections and so forth) and the multiple dimensions, repeatability and mutual coordination of the sizes and parameters is only understood as mandatory.

Let us name the basic principles on which the method of building block design and module planning are based.

1. The constituent parts of the final items have joint and tolerance sizes that correspond to the established series of sizes which is constructed on some basis (conventional unit, module, denominator of a progression and so forth) or is based on some other model. The series can be not only in terms of size, but also parameters.

2. The constituent parts of the final item have multiple application, that is, they are used with their function and parameters of compatibility in other final items and are therefore called unified.

3. A change in the composition of the unified parts (elements) and their ties (places or kinds of joining or combination) qualitatively or quantitatively changes the basic purposes of the final elements.

4. The application of these methods is inexpedient for creating individual items, that is, in each case it is necessary to create a number of final items (series, ranges, families, groups, and so forth).

The essence of the system approach in module machine building consists not only in the consideration in a unified complex of the technical aspects when planning, manufacturing and operating technical systems but also in detailed accounting for economic, technological, organizational, and social factors.

The basic directions for the introduction of module and set-module principles in technical equipment require the development of:

general principles for construction of module systems in machine building on the basis of the system approach;

terminological provision of module principles for the formation of technical equipment;

theoretical foundations for planning module systems;

methods of synthesizing module systems;

methods of evaluating the effectiveness of module systems;

methods of evaluating the technical level of module systems in all stages of their life cycle;

methods of formalizing the structure and composition of set-module systems.

A good example of the application of module principles is the industrial robot RPM-25. The system of performance modules of this robot is a unified set of 11 basic and four auxiliary performance modules. The number of various variants of combining the RPM-25 reaches 150, and each variant can be included in two different systems for program control—analogue and numerical.

Efficient construction of a unified set of modules is determined largely by the correctness of the formulation of the problems. They determine the sphere of application of the set and, consequently, have the largest number of common features. Each problem taken together can be realized in a concrete system or a number of systems that are distinguished only by parametric but not by functional or structural levels. Therefore the process of combining them should be reduced to the construction of complex systems from the standpoint of system technology.

The application of building block design and the module principle for the formation of technical equipment is especially important for accelerated development of industrial robots (PR), robot equipment complexes (RTK), and flexible production systems (GPS). With respect to these progressive means of production the principles presented above are realized through:

- 1) unification of design elements of PR's, RTK's, and GPS's, taking into account the prospects for the development of the element base;
- 2) clear-cut observance of all kinds of compatibility of performance modules and blocks intended for the creation of PR's, RTK's and GPS's on their basis;
- 3) unification of the parameters of control signals and exchange of information along various lines of mono-block items of instrument construction, constant observance of the sequence for means of computer equipment in relation to languages of programming, machine commands, parameters of signals for control and exchange of information, designs, and established sizes;
- 4) the development of organizational and methodological fundamentals for the set-module construction of PR's, RTK's and GPS's;
- 5) the development of unified systems of means of equipment and program interfacing of control means, industrial robots, and other technological equipment;
- 6) the development of a set of unified devices for coordinating systems for control of industrial robots with sensors (resistance string gauges, optoelectronic sensors and so forth), acceleration of the work of unification of gripping devices and auxiliary equipment of robot technical and flexible production systems;
- 7) organization of specialized output of performance modules of industrial robots.

In other words, the common feature of PR's, RTK's and GPS's constructed according to module principles is the size regulation, the functional determination, and the design-technological completeness of the unified constituent parts.

The construction of industrial robots according to the set-module principle, according to our calculations, will make it possible to obtain an economic effect of about 50 million rubles just as a result of increasing the series production when manufacturing set-module industrial robots and performance modules of PR's and also more efficient organization of their production. Moreover, the application of set-module principles in robot equipment will make it possible to reduce the time periods for the development, assimilation, and introduction of new models of industrial robots from 2-3 years to 2-4 months.

In addition to the aforementioned positive aspects, the implementation of measures for introducing module principles in planning, production and operation of industrial robots, robot equipment complexes and flexible production systems will make it possible:

to reduce the production cost of PR's, RTK's, and GPS's under the conditions of the introduction of mass and large-series production of individual sets and performance modules. As the practice of domestic machine building shows, doubling series production leads to a reduction of the production cost by an average of 17-20 percent;

to reduce downtime for repair and expenditures on operation (we have in mind preventive maintenance) by an average of 40 percent;

to satisfy the needs of the plans more fully as a result of the utilization of methods of autonomous interreplaceability;

to accelerate the time periods for installation of PR's, RTK's and GPS's as a result of reducing the number of joining components and surfaces;

to reduce the time for programming and adjustment of control devices for PR's and RTK's on the basis of module means of program support.

A necessary condition for effective utilization of the set-module industrial robots, robot equipment complexes and flexible production systems is work for standardization in this area.

The VNIINmash in conjunction with branches of industry has developed, approved and is successfully implementing a program for comprehensive standardization of industrial robots. Within the framework of this program we have already developed a number of normative technical documents that regulate various requirements for industrial robots of set-module design. Thus we have approved state standards that establish the classification,

types, basic parameters and technical specifications for performance modules of linear and angular movement, electromechanical models and guides.

At the present time under the leadership of the institute an addition is being developed for the program for comprehensive standardization of industrial robots which envisions the fulfillment of assignments directed toward implementation of system principles for the development, production and operation of set-module industrial robots. This will make it possible to make maximum use of the economic, organizational and technical advantages of module principles.

Close cooperation between the VNIINmash and CEMA countries contributes to successful fulfillment of assignments of the program with respect to set-module industrial robots. Conducting joint work for unification of normative technical documentation with standardization services of Hungary, the GDR and Czechoslovakia provides for a high scientific and technical level of the standards that are developed and a reduction of the time periods for the preparation and coordination of the corresponding CEMA standards.

Set-module construction of industrial robots imposes certain specific features on the process of testing. There arises a real possibility of reducing the volumes and time periods for conducting tests as a result of utilizing a priori information in the form of the results of previous tests of individual sets and modules. In order to realize this approach specialists of the VNIINmash have developed and coordinated with branches of industry an additional section entitled "Standardization of Methods and Means of Testing" of the program for comprehensive standardization of industrial robots. The assignments of this section envision the development of normative technical documentations directed toward increasing the effectiveness of tests, providing for a unity and comparability of the results of tests by the supplier and the consumer, and improvement of methods and means of testing industrial robots of set-module design.

The fulfillment of assignments of the program and consistent introduction of the principles of set-module construction of industrial robots is making a weighty contribution to increasing the effectiveness of public production.

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**Uzbek Gosplan Official Discusses
Machinebuilding in Republic**
18230035 Tashkent *EKONOMIKA I ZHIZN* in Russian
No 3, Mar 88 pp 24-27

[Interview with Mikhail Andreyevich Kandaurov, chief of the machinebuilding department in the Uzbek SSR Gosplan, by E. Shal; date and place not given; first paragraph is *EKONOMIKA I ZHIZN* introduction]

[Text] Mikhail Andreyevich Kandaurov, chief of the machinebuilding department in the Uzbek SSR

Gosplan, discusses how Uzbekistan's machine builders are realizing the tasks outlined in the 12th Five-Year Plan.

[Question] Mikhail Andreyevich, a special role is being allotted to machine building under the conditions of acceleration. It is this branch that is the basis for a further climb in the effectiveness of the country's entire national economy. In connection with this, the decisions of the 27th CPSU Congress provided for a considerable increase in the branch's rates of growth. For example, they planned for our republic to achieve a 148 percent increase in productivity during the 12th Five-Year Plan. What must be done to reach this high level?

[Answer] First, of course, we must use with maximum efficiency what the branch has available: Increase labor productivity, achieve the greatest return from production capacities, transfer enterprises to two and three shift working conditions, etc.

According to our calculations, the realization of these measures will provide us with a certain increase but not the planned one.

A substantial percentage of the increase will be obtained by commissioning new capacities. The construction of the Tashkent Motor Plant, which is expected to produce tens of thousands of engines a year, will be completed during this five-year plan. The first plant in the republic for producing fodder harvesting machines is being erected in Urgench — the animal breeders have waited for a long time for this equipment from us. New capacities for the production of iron, steel and non-ferrous castings will be put into operation in the Tashkent Tractor Plant Production Association. A new enterprise will also be commissioned in Leninsk for the production of trailers. In addition, the machinebuilding plants erected in Tashkent, the alkaline storage battery enterprise in Dzhizak and Andizhankabel [Andizhan Cable Enterprise] in Sovetabad will begin to operate at full capacity at the end of the five-year plan. Uzbekistan is paying special attention to expanding capacities of the radio engineering, electronic and electrical engineering type. These industries are noted for low metal content. At the same time, the products produced are technically complicated. This means that their manufacturing requires many worker hands even with a high level of production mechanization. They are receiving priority development under our conditions where the republic imports large amounts of metal and there is a surplus of labor resources.

[Question] As the 27th CPSU Congress pointed out, the most important condition for accelerated social and economic development is the updating of production based on reconstruction and technical re-equipping: the rapid replacement of poorly efficient equipment with advanced highly productive equipment. That is why the

12th Five-Year Plan proposed bringing the level of capital investments allocated for these purposes to 50 percent. How are the machine builders of Uzbekistan using this reserve?

More than two million rubles are being allocated to industrial construction during the 12th Five-Year Plan. This includes approximately a million rubles for the technical re-equipping of operating enterprises. This is less than half but almost 1.5-fold more than was allocated during the previous five-year period.

In operating enterprises, the percentage of capital investments directed toward technical re-equipping is more than 70 percent. The fact is that our branch has quite a few plants in which almost half of all the industrial equipment was manufactured 15-20 years ago. Today, it is already obsolete both morally and physically. Its replacement factor is still low — a few percentage points annually. To work using obsolete equipment means to increase labor and material expenditures and to lag behind in product quality.

The technical level of the republic's machinebuilding enterprises is being raised both by centrally procured highly productive equipment and by an increase in the production of machine tools and production and non-standard equipment using our own forces. The specialists in the Tekhnolog Scientific Production Association are designing and manufacturing "building-block" and special machine tools, paint drying systems, complicated dies and molds, equipment for mechanizing foundries and welding fabrication, and much more. Their experience in using parts and units made of plastic has been recommended for widespread dissemination.

It is necessary, however, to recognize that the work, which has been performed, still does not completely correspond to modern requirements. We still have few machine tools with numerically programmed controls, there is no flexibly adjustable production, automatic molding lines are absent in foundries, and robots and other modern equipment are being introduced timidly. Such effective technological processes as the manufacturing of machine and mechanism parts using powder metallurgy methods have still not received the necessary dissemination, and evaporation and metal overlaying techniques are still being poorly used during the repair of equipment. The level of painting work is unsatisfactory: Robots and highly mechanized lacquer and paint systems are still being rarely used in these operations.

[Question] The quality of machinebuilding branch products was criticized rather sharply during the 27th CPSU Congress and their failure to correspond to the present level of scientific and technical progress was pointed out....

[Answer] These questions are constantly at the center of the branch specialists' attention. Machinebuilding products are being updated from year to year. For example,

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the Chirchikselmash [Chirchik Agricultural Machine] Plant has mastered the serial production of universal cultivators; the Andizhangidromash [Andizhan Hydraulic Machine Plant] — complicated hydraulic control valves for large road construction machines, Sredazelektroapparat [Central Asian Electrical Equipment Plant] — control panels for nuclear power stations. For the first time, the specialists in the Tekhnolog Association have designed a flexibly adjustable line for reduction gear base members

However, we still have a large debt to the country's national economy. Enterprises often master innovations after a great delay, and there are those who pay little attention to updating the products they produce. For example, the Tashkent Excavating Machine Plant produces low-power equipment whose demand has sharply fallen. The Samarkand Elevator Construction Plant is producing elevators of an obsolete design. The collective of the Tashkent Tractor Plant Production Association is not confining itself to the planned time frames for developing an energy-packed tractor.

One of the many tasks of primary importance that Glavmashkhlopvodstvo [Main Administration for the Production of Cotton Growing Machines and the associations and plants of the Ministry of Agricultural and Tractor Machine Building together with subunits of the Uzbek SSR Academy of Sciences, the Central Asian Department of the All-Union Academy of Agricultural Sciences imeni V. I. Lenin, and branch and training institutes must solve in the near future, is the very rapid development and mastery of capacities for producing 100-horsepower tractor engines at the Tashkent Motor Plant, tractors with this engine in the Tashkent Tractor Plant Association, and a family of new generation cotton-growing machines and thoroughly modernized cotton harvesting machines with increased productivity that ensure the quality harvesting of cotton and good conditions for the work of the machine operators.

A no less serious goal has been set in front of the collective of the Uzbekkhlopkomash [Uzbek Cotton Machine] Association. Here, they are faced with developing and mastering the output of production lines and new generation cotton cleaning machines that insure high quality initial processing of the cotton and a high level of mechanization and automation of the technological cycle.

The collective of the Uzbektekstilmash [Uzbek Textile Machine] Association is faced with developing and mastering within a very short time the production of a cocoon reeling equipment complex.

The periods for mastering new machines and equipment remain a painful question. They are frequently dragged out unjustifiably. For example, this occurred in the Andizhangidromash Association where they prepared

poorly for the production of new universal loaders. As a result, farms were not issued 460 highly productive mechanism valued in all at 1.2 million rubles.

[Question] We have addressed deliveries. Is it possible to find out the results with which the branch enterprises completed the second year of the five-year plan?

[Answer] The results are unfavorable. An unprecedentedly complicated situation has taken shape at many machinebuilding plants and in associations. The branch has never faced such a gap. The targets for the second year of the five-year plan have not been fulfilled according to many indicators. Of the 62 types of machines and equipment produced by the branch, the plan was not fulfilled for 34 types of marketable products. The machine builders did not reach the planned level of increase in production.

Electrical engineering industrial enterprises are operating with a large shortfall. They have failed to deliver products valued in all at 35.7 million rubles. For example, the collective of the Sredazelektroapparat Association did not reach the planned rate of growth. The Sredazkabel Association failed to deliver products valued at 19.5 million rubles. The Dzhizak Storage Battery Plant and the Andizhan Elektrosvigatel [Electric Motor] Plant fulfilled the sales plan by only half.

[Question] What are the reasons for the shortfall?

[Answer] There are many of them. A portion of the enterprises did not cope with their targets because of the low technical level of production equipment and the obsolescence of the equipment. Logistics interruptions inflicted large losses on production. Sredazkabel was in a bind because of unsatisfactory deliveries of low pressure polyethylene and cable flexible PVC.

[Question] The opinion is often expressed that machine builders have "sat down" because of the introduction of state acceptance of products. They say that the requirements have been made more severe. Is this so?

[Answer] Indeed, one can cite quite a few examples of where the demands on the quality of the produced products, which have been made more severe by the state examiners, have complicated the production situation.

For example, the labor productivity of machine-tool operators and fitters in the Uzbektekstilmash Association has decreased as the requirements for complying with manufacturing processes, standards and specifications have grown. The production preparation shops are not managing to produce new equipment which insures high quality components. That is why the association's collective systematically does not cope with the planned targets for commodity production volume.

The collectives of the Tashkent Tractor Plant Association and the trailer plant, in particular, have begun to work more poorly under the conditions of state acceptance. By the beginning of the harvesting campaign, the cotton-growers had failed to receive 4,500 trailers for the bulk shipment of the cotton because of the low quality in the manufacturing of parts and units, the absence of qualified personnel, and an irregular work rhythm.

There also exist, however, examples of the opposite type. The collectives of the Tashselmash, Uzbekselmash, Chirchikselmash, and Samarkand Refrigerator plants have prepared carefully and in a timely fashion for the introduction of the new form for organizing control. That is why they have been able to organize the necessary reserves for improving product quality.

We have analyzed the experiences of enterprises that are working under the conditions of state acceptance and we have brought to light what was omitted and what was not done during the preparatory period and what difficulties the collectives encountered during the transition process. This material was summarized and it served as recommendations for enterprises during the second transition stage. Their attention was especially directed toward production preparation shops and services: The analysis showed that the capacities of these shops are very poor and do not correspond to modern requirements. On the average, they now represent 1.5-4 percent of the total production volume; and, yes, the production of serially-produced products often swamps them in addition. This has occurred at the Samarkand Refrigerator Plant. The design of the project included an equipment shop for the entire industrial zone and, moreover, equipment was received for its outfitting up to and including erosion machine tools for the manufacturing of stamping attachment hard-alloy inserts. The shop, however, was not put into production and the equipment was partially broken up. It has only been during the last two years that the situation has been corrected. The shop has begun to provide the necessary equipment and the capability of shifting to the production of new items has been increased.

The branch is experiencing an acute shortage of people to set up machine tools with numerical controls, robots and mechanical arms, and simply metal workers, machine operator-tool makers, product engineers and production preparation service foremen.

A decision has now been made to bring the capacities of the production preparation shops and services to 10 percent of the total volume. This will be an important reserve for improving product quality through the strict observance of manufacturing method norms. It seems, however, that the planned level is a minimum one. In the future, it is also necessary to build up the capacities of this important link in the manufacturing chain further.

[Question] Since 1 January of this year, Uzbekistan's machine builders have begun to operate under the conditions of complete cost accounting and self-financing. How have the collectives prepared for this important restructuring of the economic mechanism?

[Answer] Meetings with specialists in the enterprises and an analysis of the state of affairs show that a majority of the collectives have received and are working on state orders, have determined capabilities for obtaining increased profits, and have approved deduction norms. A number of enterprises, however, have not taken decisive steps to improve financial and economic activity and are allowing large expenditures of materials, energy, labor, unproductive losses, and irrational production organization costs. All-union penalty sanctions, the establishment of considerable reserves of material valuables — all of these chronic illnesses will undoubtedly have an effect on the financial condition of the enterprises as they affected last year's results. The collectives of the Uzbektekstilmash, Uzbekkhlopkomash, Sredazkabel, Sredazelektroapparat, and Sredazseikhlopkomash associations and Glavmashkhlopkovodstvo enterprises did not manage the projected profit plan. All of these collectives must exert even more efforts to learn how to work in the new way and not only to settle accounts with the state in a timely fashion but also to allot assets for the technical re-equipping of production; the construction of housing and social, cultural and domestic projects; and the material rewarding of the collective.

[Question] The collective of the Sredazkhimmash Association, which was the first one in the republic to begin working under the conditions of self-financing, has already been working for a year under the new economic mechanism....

[Answer] Their experience undoubtedly deserves special attention although it is impossible to say that the collective has been able to overcome every difficulty and has coped successfully with its assigned target. The association lost its growth rate because of the unsatisfactory quality of the products it produced and because of deficiencies in logistics. The irregular delivery of diesel engines and component assemblies for compressors was the reason for the derangement of contract obligations. The collective failed to deliver more than 700 compressors to the users.

This will be a complicated year for the machine builders. The restructuring of the economic mechanism and the shift to complete cost accounting, self-financing and self-support [samookupayemost] requires a high organizational level, clear production and technological discipline and a large exertion of strength from all workers in order to solve the assigned tasks successfully.

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RAIL SYSTEMS

Heavy-Duty Transporter Technology Research
18290104a Moscow GUDOK in Russian 1 May 88 p 2

[Interview of Aleksey Nikolayevich Germanov, academic secretary of All-Union Scientific-Research Institute of Railroad Transport, by correspondent A. Kapkov: "Prizes for the Best"; first paragraph is source introduction]

[Text] The awarding of prizes for 1988 by the USSR Council of Ministers for the fulfillment of comprehensive scientific research, planning-design and technological work on the most important directions of development of the national economy and its sectors has already been reported in the press. Persons conferred this honored reward include transport workers, engineers, planners and scientists. What they have accomplished for the improvement of transport technology and raising the operating efficiency of railroads is described to our correspondent A. Kapkov by A. Germanov, academic secretary of the All-Union Scientific-Research Institute of Railroad Transport.

[Question] The awarding of prizes by the Council of Ministers has been noted officially in bulletins: "For Development and Introduction into the National Economy of a Comprehensive Technology of Shipments of Large-Size Heavy Industrial Equipment." Tell us, please, Aleksey Nikolayevich, what the reason is for such a technology today and what effect it produces!

[Answer] The need is most urgent. It is due to the present features of development of industrial and power equipment. On the one hand, this means increased unit capacity necessary for reducing construction costs and, on the other, it requires maximum plant readiness for its fastest possible installation with enlarged units of plant manufacture.

Hence the demands upon shipments. The fact is that in a number of cases assembly of equipment under plant conditions is the only possible way. And it is very important for it to be possible to deliver the goods by railroad. At the same time, the construction cost of an AES is significantly reduced through growth of reactor capacity. The transition in the chemical industry to operation of bigger capacity technological facilities makes it possible to boost labor productivity more than tenfold. At the same time, it is important to reduce specific capital investment and production cost.

Such is the end effect. And, naturally, it cannot be secured without transport. The fact that it was found to be ready for the solution of such tasks is shown by figures. In the past 10 years, large-size freight transported by railroads has grown several fold. And judging by forecasts, these tendencies remain.

The forecasts have made it possible to carry out timely preparations for the manufacture of new types of transporters, to develop a technology of their throughput with heavy freight, to determine more precisely the rate of their delivery and to provide for conditions of shipment safety.

It is difficult even to enumerate the products being hauled today on freight transporters. It includes bodies of reactors, steam generators, machine tools, presses, various chemical and petrochemical apparatus and much else. But in order for all such nonstandard freight to be shipped by railroad, specialists of the USSR Ministry of Railways together with the Institute of Comprehensive Transport Problems developed in a short time various types of connected coupling, platform and other transporters with a load-carrying capacity of 110 to 500 tons.

[Question] Who of the transport scientists participated in the development of the new technology and what specifically was each one's contribution?

[Answer] Both theoretical and experimental research was required for the creation of the new types of transporters. And the listing is as follows. Doctor of Technical Sciences A. Kogan (All-Union Scientific-Research Institute of Railroad Transport) developed the mathematical model for study of the interaction of transporter and track. He used for the first time a design scheme which considers transporter and track as a unified system with feedback.

Doctor of Technical Sciences A. Lvov (All-Union Scientific-Research Institute of Railroad Transport) proposed a mathematical model of spatial oscillations of transporters with assymetrical disposition of freight. He determined theoretically and verified experimentally the permissible size of displacement of a cargo's center of gravity and the permitted speed of movement. In addition he developed a method of calculating the transverse resistance of transporters to overturning.

Candidate of Technical Sciences Docent of the Moscow Institute of Railroad-Transport Engineers P. Anisimov experimentally validated the new norms of shipment of assymetrical cargoes of varying mass.

Testing of transporters involved the participation of the collectives of the All-Union Scientific-Institute of Railroad Transport, the All-Union Scientific-Research Institute of Railroad Car Construction, the Dnepropetrovsk Institute of Railroad-Transport Engineers and the Experimental Design Bureau for Railroad Transporters. Instructions were issued on shipments of large-size and heavy-weight freight.

It is also necessary to speak of the strict centralized system of control of such shipments. Centralization here is a necessary element of technology. All the reins of

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government were assumed by the Department of Over-size Shipments of the USSR Ministry of Railways. V. Androsyuk and L. Moshek, the ministry's specialists heading this work, were also awarded prizes by the Council of Ministers.

[Question] And a last question concerning those who worked directly with the special-purpose transporters. Who among them was awarded prizes by the Council of Ministers?

[Answer] Verification of the theory in practice was aided by many railroad workers. But preference was given to Ye. Kiyko, chief of the car-transporter from the Zapozhye Branch of the Dnepr Railroad, who became the prize winner. The proper securing of freight on transporters and their care in the shipment process are painstaking work requiring both aptitude and knowledge. All this has been mastered to perfection by Ye. Kiyko. The new technology has become successful in practice because it was carefully thought out in theory and verified in practice.

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First-Quarter Capital Construction Results 18290104b Moscow GUDOK in Russian 24 Apr 88 p 2

[Unsigned article: "There Are No 'Unprofitable Construction Projects'—Comments on a Joint Meeting of the Collegiums of the USSR Ministry of Railways, the USSR Ministry of Transport Construction and the Presidium of the Trade-Union Central Committee"; first 4 paragraphs are source introduction]

[Text] Recently an expanded joint meeting was held of the collegiums of the USSR Ministry of Railways and the USSR Ministry of Transport Construction and of the presidium of the Central Committee of the Trade Union of Workers of Railroad Transport and Transport Construction. The results discussed were of fulfillment of the plan of capital construction in the first quarter and measures that needed to be adopted to deal more successfully with the annual target.

Reports were presented by Deputy Ministers N. Isingarin and G. Falaleyev. Taking part in the discussion were trust managers M. Omelnitskiy (Sredaztransstroy Trust), M. Barkinkhoyev (Ordzhonikidzetransstroy Trust), A. Shapovalov (Yugovostransstroy Trust), E. Kotikov (Zabaykaltransstroy) and the deputy manager of Mosmetrostroy Trust E. Sandukovskiy, railroad chiefs K. Kobzhasarov (Alma-Ata Railroad), Ye. Balkov (Kemerovo Railroad), B. Chebotarev (Volga Railroad), A. Zaytsev (October Railroad), V. Babenko (Krasnoyarsk Railroad) and V. Dovgallo (Transbaykal Railroad), the chief engineer of Glavzhelostroy Trust of the North and West O. Nartsissov, Deputy Minister of Railways G. Korenkov, the chief of the Main Administration for Repair of Rolling Stock and Spare Parts Production Yu. Krasnov and railroad committee chairmen of the Trade

Union of Railroad Transport Workers N. Pavlyuk of the Moscow Railroad and V. Kamenev of the Siberian transport builders and I. Shinkevich, chairman of the trade union's Central Committee. In conclusion, N. Konarev and V. Brezhnev, the ministers of railways and transport construction, spoke.

A resolution was adopted on the basis of a broad and comprehensive discussion of the questions.

The uplifted mood of the transport construction and railroad workers gathered in the conference hall of the USSR Ministry of Transport Construction was explained by good work results in the first quarter. The transport builders fulfilled the plan 106 percent. And the main thing was that they had reached the targets of not only newly constructed items but also for the existing system, which had not been done for a long, long time. Moreover, the number of lagging trusts and administrations compared to the same period of last year had been reduced by more than half. Now only 20 of the 102 had failed to meet the quarterly target for the USSR Ministry of Railways.

The road builders also fulfilled the plan and had made 13 million rubles more than at this time last year. True there were laggards among them. Of 35 trusts, 14 did not fulfill the quarterly plan. They include the East-Siberian, the Odessa, the Baltic and the Southwestern railroads while the trusts of the Southern, Kemerovo and Moscow No 2 worsened their indicators compared even to last year. But still the general rise could be shown and this made everyone happy.

However, those assembled understood that the discussion would be serious and there was much work ahead: first, because what had been accomplished in monetary terms was only one-fifth greater than planned, although in physical units the annual plan was quite impressive. There are to be built 544 kilometers of new lines and almost 1,300 kilometers are to be electrified, 586 kilometers of second track to be laid, 1,230 kilometers to be equipped with automatic block systems, 1,837,000 square meters of housing to be built and 10,000 children to be provided with places in preschool institutions, also hospitals, polyclinics and vocational and technical schools are to be erected and many enterprises to be constructed and modernized.

And second, despite the general success, there are still many laggards, and therefore far from everything that was required has been done, much less than could have been done in general. All this was illuminated and pointed out by builders and railroad workers in their speeches. True, not everyone spoke in the way that life demands today: briefly, articulately and candidly concerning defects and reserves and about methods of eliminating the former and putting to use the latter. An attempt was even made to explain their mistakes with others' subquality work,

but the person chairing the meeting immediately put a stop to that, saying that it is necessary to look not for grounds of disagreement but for ways of jointly resolving disputed questions.

And indeed mention was made more than once of cooperation between customer and contractor, which helped to solve many problems and to achieve good results. More than 20 persons spoke, and so as not to drown in a sea of figures and designations, let us describe only what are in our opinion the most important views and proposals.

We know that because of inadequate allocation of monetary resources, the share of railroad-transport production capital in the national economy since the '70s has been reduced by almost one-third. Should the process continue, serious difficulties would arise with shipments. In order to avoid this, it is planned to significantly increase investment contribution for development of transport in the immediate years ahead.

The tens of billions which it is planned to spend before the year 2000 for these purposes will, of course, radically change the situation. But the whole trouble lies in the fact that we so far have consistently not been utilizing even obviously inadequate sums, but rather far less. We need to more confidently move up to new amounts, train people, equipment. The government needs to convince itself in the present year of 1988, which is largely decisive from this standpoint, that the money which it will release for the development of steel trunk lines will not lie as dead capital but will be quickly utilized, strengthening the most important sectors of the transportation conveyor.

Does such a possibility exist? Without a doubt, it does. The fact is that even now when the plan as a whole has been overfulfilled 6 percent, Urengoytransstroy, Krasnoyarsktransstroy, Zabaykaltransstroy, Abakantransstroy, Ufimtransstroy, Dneprotransstroy, Saratovtransstroy, Pavlodartransstroy, Magnitogorsktransstroy, Sevtransstroy, Bamstroyut and several other trusts have not fulfilled the plan for the first quarter.

If you were to look attentively, you would find among them many "old friends" who from year to year have been poorly working on railroad facilities. And here obviously nothing can be done with general entreaties. It is necessary for each one to engage in such a "chronicle." To determine what the chief reason is, to explain, to help and to find those economic stimuli which interest people and make them turn to the most important task.

Unfortunately, very often because of poorly organized interaction between customer and contractor, it is not advantageous for subdivisions of the USSR Ministry of Transportation Construction to work on the modernization of an existing transport system and enterprises. Nonassignment of a work front, of "windows" or their

brief duration, nonfulfillment by railroads of subcontracted and concomitant work—all this retards a construction job and makes it insufficiently profitable. But this under the conditions of self-financing means that there is nothing to pay people's wages with. Consequently the people of the USSR Ministry of Transport Construction sometimes look for work on the side.

All these difficulties are known ahead of time, which means that they ought to be overcome beforehand. That, we must hope, is how it will be. The fact is that in the last year the style of joint selector conferences and examinations has started to change. From endless mutual recriminations the people have shifted to mutual understanding and mutual help. And this made it possible to move the time of startup "to the left," and already in last December there were fewer underway projects. As a rule only those facilities were turned over whose startup was being held back due to late delivery of equipment by industry.

But today this is already insufficient. Both of the ministries have changed to new methods of economic stimulation and now it is necessary to pay more attention to the conclusion of a contractual agreement, coordination of contract prices, title lists of construction projects and delivery schedules of equipment. To clearly determine everything a year to 2 years in advance so as not to be late with documentation and opening of financing. The setting up of a plan for 1989 has already been started, and we must avoid in it the mistakes committed in the last. This is all the more important since it will consist of only 30 percent of state orders. The rest of the collected list of work will have to be done by the trusts themselves in such a way that it would be to the advantage of the trusts and the chief customer, the USSR Ministry of Railways.

Before the new and broad development of work, it is very important to bring up the rear and to free oneself from old sins. And they are many. Railroad lines, second tracks and electrified sectors that have already gone into operation are being completed intolerably slowly. Up to the present time the personal-service quarters of locomotive depots in Altayskaya and Atbasar, the Kudzhevoye and Kusda traction substations, the power sectors in Zavitaya and Krasnoufimsk, purification structures in Irtyshkiy and Yekaterinoslavka and many other facilities on lines that were electrified back in 1977-1983 have still not been turned over for operation.

On the Transbaykal Railroad, more than 1,000 kilometers were electrified recently, but the list of work with flaws in workmanship is so great that it would not be physically possible to present. The same sort of situation is Estonia be found on many new lines and sectors of second track. The Baykal-Amur Mainline is no exception. There today following the completion of the bypass

for the Severo-Muyskiy Tunnel they are getting ready to operate on the railroad 10-12 pairs of trains, to force it to work under pressure and thus reveal more quickly all its defects.

Housing and social, cultural and personal-service facilities are built very poorly on the new construction projects. One gets the impression that their title lists in general lack Section B. This unfortunately has led to the fact that in a number of places there is no one to maintain new production facilities.

Construction questions have bothered everyone without exception, even the Alma-Ata Railroad, which fulfilled last year's plan 139 percent. The fact is that in order to cope with the housing program designated in the Kazakh republic, it will be necessary to use all the time remaining to 1991 to fulfill an annual target in 9 months. Putting up houses a brick at a time would not allow such a tempo to be attained. Large-panel house construction is required. But the plant for large-panel house construction is only now beginning to be planned. The railroad therefore proposes to convert at this point to monolithic erection of buildings. It asks for allocation of metal. Three hundred tons of it are required for a single unit of the Luchshe form [opalubka] if several such units are to be made for each section of the railroad.

In Siberia, housing construction is based at the Tayshet plant for large-panel housing construction. But it alone will not be able to manage. Why could not the railroad people and the transport builders through joint efforts quickly build such a plant in a year or two? It is only necessary to start working on the undertaking with interest and care.

But for the railroad builders to be able to erect residential buildings in large cities, tall cranes and other equipment would be needed. It would also be necessary to equalize the possibilities of the road trusts [dor tresty] with other similar organizations. The fact is that just now 1 million rubles of construction and installation are being allocated for trusts of the union republic and the

railroads (respectively): metal—250 and 160 tons, cement—1,245 and 840 tons and timber—370 and 307 cubic meters. This is still a big disproportion compared to the norms of other construction ministries.

But, of course, it is necessary not only to raise average norms but also to introduce resource-conserving technologies. To economize cable, to use where old suitable materials where possible and not to ask for more equipment than is needed. Even now it lies in warehouses to the tune of 52 million rubles.

This is good when one does not have to wait long for deliveries but it is bad that what lies in anticipation of installation is frequently stolen. Why was it necessary, for example, to delivery equipment a second time for the boilerhouse in Fevralsk.

Everybody undoubtedly would have been satisfied on completion of electrification of the lines in the third quarter. But industry is unable to issue to everyone that yearly norm before July. This means that it should be intelligently distributed now, taking into account the readiness of road sections and climatic conditions. But in knowing from now on that we can do this in a shorter time, it is necessary to plan in advance an increase in deliveries for the second and third quarters.

And, of course, no industry will be of help if the transport and road builders do not have their own good bases. They are now being built both by the railroads and the trusts, but slowly, as if not for oneself but for some stranger. This will not do at all. And in this, just as in other affairs, it is necessary to strengthen the mutual aid of railroad people and transport builders, remembering that the responsibility lies on their shoulders for the realization of the comprehensive program of modernization of trunk lines and for the creation of conditions for the reliable operation of the country's main transport conveyor.

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